

CONTENTS COPYRIGHTED 1935

JANUARY 1936

ASTOUNDING

STORIES

20¢



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by RALPH MILNE FARLEY

and

STANLEY G. WEINBAUM

Strange City

by WARNER VAN LORNE

The Isotope Men

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AST-1

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On Sale Third Wednesday of Each Month

VOLUME XVI
NUMBER 5

ASTOUNDING STORIES

JANUARY
1936

A STREET & SMITH PUBLICATION

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Table of Contents

Novels:

- THE ISOTOPE MEN** *Nat Schachner* 40
A carefully prepared thesis extending logically to the ultimate conclusions which have been suggested by scientific experiment.

- STRANGE CITY** *Warner Van Lorne* 116
Carrying the thread of an idea which was hinted in the expositions of Thomas Edison's theory of life.

Novelette:

- SMOTHERED SEAS** *Ralph Milne Farley and Stanley G. Weinbaum* 8
Green crept over the face of the sea; climbed mountains; followed brooks to their source; while men trembled.

Short Stories:

- MOON CRYSTALS** *J. Harvey Haggard* 30
A story of mad adventure on a planet where man sought minerals for his own benefit.

- LABORATORY CO-OPERATOR-3** *B. L. Bowman* 76
An experiment in telepathic transfer—which becomes a life adventure!

- STRANGER FROM FOMALHAUT** *Clifton B. Kruse* 106
A thrilling episode of the starways—of space ships—and space men.

Serial Novel:

- BLUE MAGIC (Part III)** *Charles Willard Diffin* 86
Continuing the thrilling story of a woman who abused the power she held. To be concluded next month.

Readers' Department:

- BRASS TACKS (The Open House of Controversy)** 153
EDITOR'S PAGE 7

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*Story Illustrations by Elliott Dold, Jr., M. Marchioni,
Wesso, Brown, Thompson, Schneeman.*

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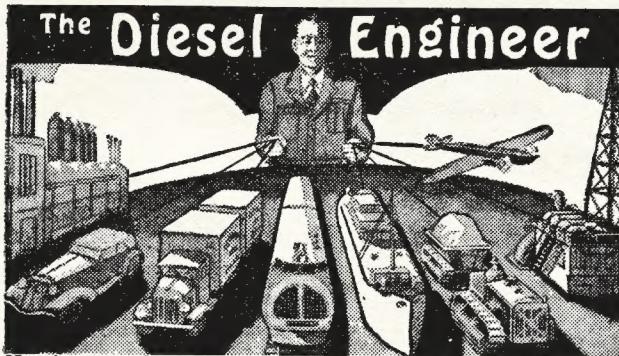
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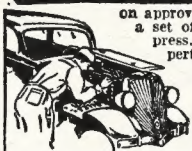
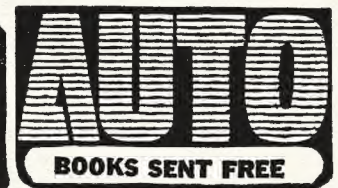
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Dr. W. R. George

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Pointed Paragraphs

We step now into 1936. It holds new promise of progress because of the carefully digested tabulation of expressed desires during the period we have covered together.

H. P. Lovecraft returns to science-fiction with a three-part serial, "At the Mountains of Madness," starting in the February issue. This story is not in exact line with the general run of science-fiction—but it is good science and it creates one of the finest word pictures I have ever read. You will find solid enjoyment and much food for thought as you read it.

Also scheduled for next month are: "Mathematica," by John Russell Fearn, undoubtedly one of his best efforts to date; "Cones," by F. B. Long, Jr.; "Death Cloud," by David R. Daniels; and "Buried Moon," by Raymond Z. Gallun.

The creation of an interesting magazine of fiction requires the intelligent incorporation of many elements. You and I have seen many magazines become monotonous because of SAMENESS. That is the danger which is constant to any magazine where the man who occupies the editor's chair is not an editor—and there are many such.

If one story appeals UNANIMOUSLY to a reading audience as GREAT, I feel it my duty to avoid another story similar in style and background, lest the very things that made the first appeal destroy the value of BOTH as interesting reading.

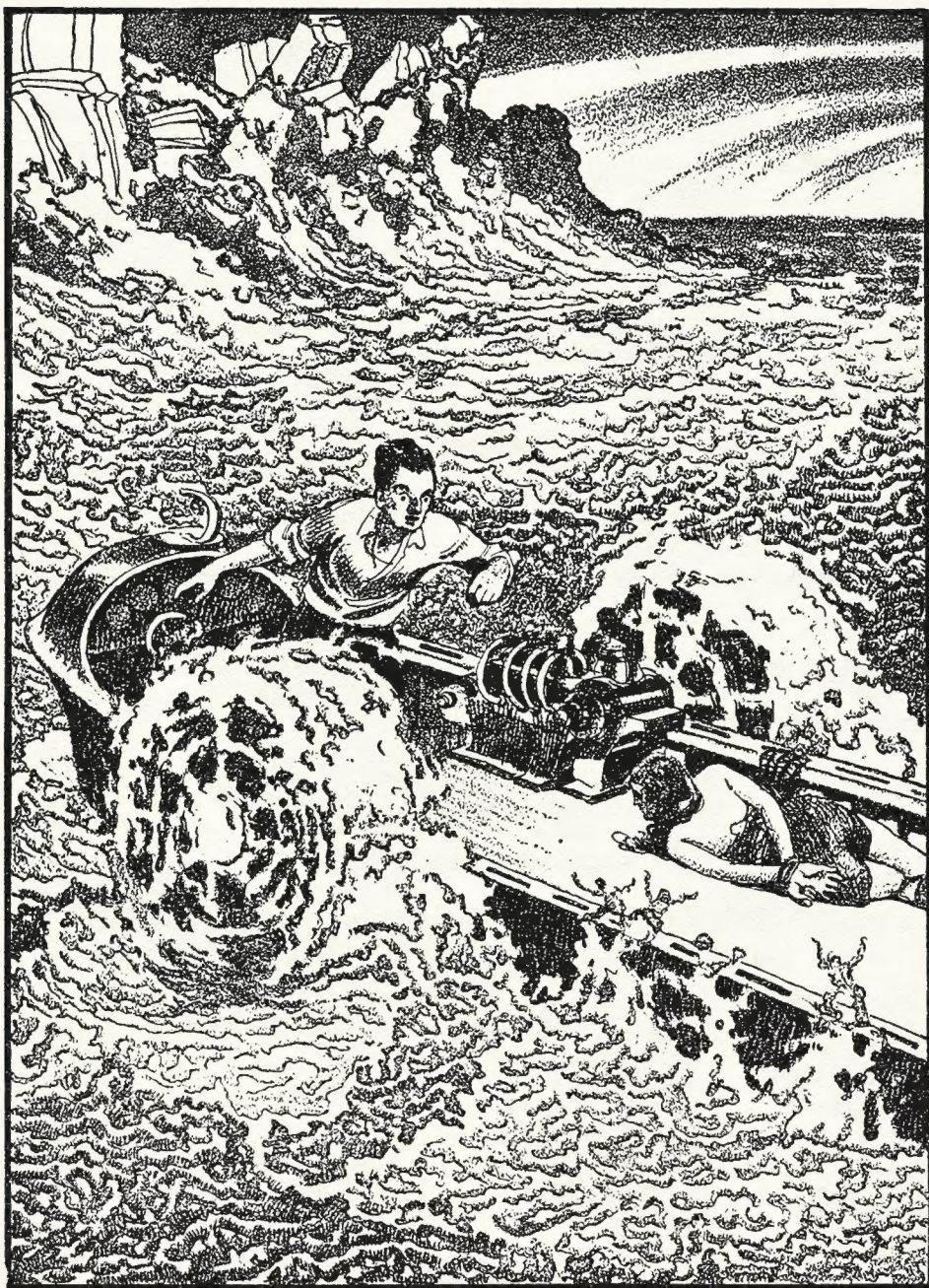
If the story contains the germ of a new and thought-provoking idea, I am prejudiced in its favor. Thus I classify "The Isotope Men" with its superscientific projection of actual isotope experimentation; and "Strange City" with its intriguing electrical "life transfer" which links closely to the theory of life held by the late Thomas Edison.

To balance this presentation of idea stories, we seek and find an imaginative science-adventure in "Smothered Seas." To complete the balance "Blue Magic" carries on. And the spaceways are represented, and the distant planets, and psychological science—in the shorts.

Thus a magazine is made, keened, and put together. Stories as foils for stories. Contrasts set to emphasize contrasts. Varied interests carefully spaced so as not to pall by their sameness.

I have wanted to chat with you about this for a long time and to-day it just sort of bubbled out. I know it will help us to understand each other better. What you want me to do—and what I'm trying to do are one and the same.—The Editor.

Smothered Seas



"What's this?" he snapped.

"It's your fuel," she said, triumphantly. "I drained the tank!"

by Ralph Milne Farley
and Stanley G. Weinbaum

*The seas crept with green. It crawled
up the shores and smothered the hills!*

IT was the year 2000. America was at war, fighting for her very life against the Asiatic Union. And yet the American people—even army officers—found time for recreation. Recreation was a necessity, to take one's mind off the titanic struggle.

Lieutenant Richard Lister, clad in swimming trunks, sat on a beach rug, staring moodily out across the Pacific Ocean toward the Seal Rocks and beyond, his hands clasped across his tanned knees, his bronzed face tense.

"Let's not talk about the war; let's talk about us!" he exclaimed to Sally Amber, who sat beside him.

The girl turned her strange, dark eyes inquisitively upon him.

"You shouldn't feel that way, Dick," she said seriously. "Particularly as you're in such an important branch of the service. I'm not kidding; I mean it. Where would the country be without your Bureau of Military Biology and Bacteriology? We'd all be wiped out by the Asiatic Union's germs!"

"Sure. And if it weren't for their bacteriologists, they'd be wiped out by our germs. It's a deadlock, I tell you, like this whole war. Look at Alaska: For more than a year now the Khan has been holding that little corner from Rocky Point to Cape Espenberg, and we haven't been able to budge his line a single inch, nor has he been able to budge ours. Each army is protected by one of those impenetrable Beckerley electrical fields.

"Alaska is the key to the whole situation, with the Khan there in person. If we could just get through his Beck-

erley field, and put an end to him, the whole Asiatic Union would crumble. It's only his personality that can hold together such naturally hostile groups as the Siberian Russians, the Japs, the Chinese, the Tartars, and so forth. Without him, they'd be at each other's throats in a few hours!"

"Well, why doesn't somebody do something about it?" asked Sally, impatiently.

"Lord knows we've tried!" Lister exclaimed. "Ten or a dozen brave Americans have gotten through the enemy lines, and tried to assassinate him, only to be captured, and subjected to horrible torture and death."

The girl shuddered, and pulled one corner of the beach rug up around her shoulders.

"I don't suppose I'd rate as a 'brave American,'" she said.

"I'd take a chance on your bravery," Lister declared.

"Why doesn't America land troops in Asia?" Sally asked.

Lister stared at her sharply.

"You know as well as I do," he said. "Although America controls the seas ever since we annihilated the Khan's fleet off the Marianas six months ago, yet he has ten million men under arms in Asia. What good would it do us to land our five million against such odds? No, we've got to lick the mad Khan in Alaska—somehow."

"He isn't mad!" snapped Sally, unexpectedly.

"How do you know?"

"I've—I've—well, I've seen him."

"I didn't know you'd ever been in Asia."

"There are lots of things about me that you don't know," she retorted. "My father is dead, and I am quite wealthy. I've traveled a lot. Three years ago I was in the eastern capital—Harbin; and, what's more, I've been in Moscow, the western capital, too."

"So you've seen the mad Khan," mused Lister. "Did you ever see the woman they call Princess Stephanie? What's she like? She's supposed to be very beautiful."

Sally shrugged. "Oh, she's all right, if you like that type," she replied airily. "She's dark and has Khazar blood in her, and she's about my age—and anyway, why are you questioning me? Go on with your little lecture."

"About us?" he asked hopefully.

"No." She reached out one slim hand, and gently patted his knee. "About the Beckerley electrical fields. What are they? How do they operate?"

HE FROWNED thoughtfully, trying to phrase his answer in words that a girl would understand.

"It's an application of Morelle's experiment with electrical eddy currents," he said. "I'm a botanist, not an electrical engineer, but I know that the idea involves the refraction of lines of magnetic force."

"It works like this: Over each army on the Alaskan front the scientists have created a dome of electrical tension—a magnetic field. Any shell or drop bomb passing through this magnetic field is instantly heated to white heat by the electrical eddy currents induced in it by the field, and is thus caused to explode in mid-air."

"Every city is likewise protected by a Beckerley field. You know how each auto-copter, on leaving the city limits of San Francisco, has to stop and be pushed through an iron-shielded subway

until it's beyond the Beckerley field? Well, that's because the gasoline in the tank would be heated to the flash point by the walls of its container."

"How about solid shot?" asked Sally.

"That can pass through a field, of course, but what chance has solid shot of doing much damage? Our own copters could down any possible fleet of enemy planes long before they could drop enough solid missiles to do appreciable harm to a city; and as for the Alaskan front, the most that either side could do would be to chip a few rocks in the Yukon Hills."

"No, the situation's a deadlock; the Khan is swept from the sea, but his enormous army prevents our invading Asia, and neither side can advance an inch in Alaska because of the Beckerley fields. It can't even become a war of attrition, because both the Asiatic Union and the United States are entirely self-supporting, and can never be starved into submission."

"Do you think so?" asked Sally Amber in an odd voice. Suddenly she shrugged her smooth, brown shoulders as if to change the subject. "Will Admiral Allen be here Saturday?" she asked casually.

"Why, no, I don't think——" Lister caught himself abruptly. Allen had told him, in the very strictest of confidence, of a proposed attempt to cut the Asiatic supply line to Alaska by a concentrated attack on Behring Strait. The Pacific fleet, idle since the engagement near the Marianas, was to sail secretly before dawn on Saturday.

He glared. "Why do you ask such a question?" he snapped. "If I knew, I shouldn't tell, and you know it."

Sally laughed. "Silly!" she chided. "It was just that I was considering having him and you and that flying detective, Jim Cass, to a little dinner at my apartment Saturday. You see, I still haven't met Jim Cass, and you've spoken of him so often that I'm curi-

ous. After all, if he's a friend of yours, Dick——" She smiled very tenderly at him.

Lister shook his head. "Captain Cass is no friend of mine," he declared. "He's just an officer of the military intelligence who breezes into my laboratory from time to time, and pokes around looking for clues and trouble. He gives me the creeps. I never knew such a cold-blooded man! He'd turn his own mother over to a firing squad, if he thought it would help win the war."

"Well, wouldn't you or I do as much for our country?" asked Sally. "And, besides, his very coldness intrigues me. I want to meet him."

"Suit yourself," said Lister. "Have we time for another swim?"

She puckered her lips disapprovingly. "Oh, no!" she exclaimed decidedly. "The water's so full of that horrible green slime that it's no pleasure to swim. Let's start back to town."

"It is bad," he agreed. "It's just a variety of *confervæ*—what we commonly call *algæ*. There have been some complaints of it in the drinking water, too. It's harmless, but they ought to chlorinate the city reservoir." He rose and stretched. "Let's dress and get started, then."

It was not quite 2:00 p. m. when they landed Sally's convertible helicopter in front of the building near the Presidio that served as the office and laboratory of the local unit of the Bureau of Military Biology and Bacteriology. Lister stepped reluctantly out of the machine, and turned to Sally at the wheel.

"To-night?" he asked hopefully.

She shook her head. "Sorry. I have to dine with some family friends."

"To-morrow night, then?"

"I shouldn't. I——"

"But you will," he stated positively. "Heaven knows if I'll be stationed here

long, and I don't want to waste a moment."

"Why?" she asked sharply. "Do you expect to be transferred?"

He bit his tongue. "No, but——"

Needed distraction came. He whirled and saluted a dark, sinister-looking army officer descending the steps of the building.

"Sally, here's Captain Cass at last. I thought he'd be in to-day! Sir, this is the Sally Amber you've heard me talking about so much."

Jim Cass took the hand Sally extended. "No wonder Dick's been raving," he said, staring at her appraisingly with his cold, blue eyes. "I apologize for thinking he was nuts. I didn't believe he had the good taste——"

His stare changed to a puzzled frown. "Say, haven't we met before?"

"If we had," said Sally, "I wouldn't have forgotten it."

But Captain Cass stood staring, long after her copter was indistinguishable among the cross currents of traffic.

CASS was no closer to the solution when he dropped in on Lister the following day. The biologist, in laboratory smock, was busy with the war-time routine of checking water samples from half a dozen coastal cities, and had but little time to listen to his superior.

"Oakland," he muttered, "bacterial count seven per c. c.; that's normal. Monterey, eleven; that's safe. Vera Cruz—say, did you ever see so much *algæ* in the drinking water? Look at that beaker on the window sill. That's after two hours' exposure to sunlight, and it's as green as pea soup already. What's more, I saw reports from Chicago that it's just the same there. And—this is queer—from London as well."

"What's that fuzz on the trees?" asked Cass thoughtfully, looking idly out of the window. "I never saw that here before."

"Yeah, I noticed that. It's just a

tree lichen, something like Spanish moss. A cryptogamous plant—that is, a spore-breeder. It's related to—— By the Lord! It's confervæ, too, just like the algæ!"

"Well? So what?"

"So nothing, except that whatever has stimulated the algæ in the sea and in the drinking water, has also stimulated the lichens and the fungi. The cryptogamoids are the sort of plants that grew on earth during the carboniferous age, the age of coal."

"Maybe we're in for another age of coal, huh?"

"Hardly," said Lister, laughing. "There are several theories as to what caused the carboniferous age, such as a higher concentration of carbon dioxide in the air, or a world-wide tropical climate, or intense sun-spot activity, which would induce frequent and violent electrical storms on the earth, and hence produce an abnormal amount of ozone in the air. Ozone is a particularly dense form of oxygen, and is able to filter out the death rays——"

"Death rays?" exclaimed Cass, pricking up his ears. He had been paying very little attention to Lister, but here was something in his own line—something the military intelligence ought to know about. "Death rays?"

Lister laughed again. "Not the kind of death rays the army is interested in," he said. "But there are certain invisible rays of sunlight which have a fatal effect on living creatures. Ozone filters them out."

"It's one of the remarkable instances of the balance of nature that there is normally just enough ozone in the outer layers of the atmosphere to keep out the quantity of that invisible light which would be fatal to human life, and yet let in just enough to keep the algæ within reasonable bounds. Now if—— Say! I wonder!"

"You wonder what?"

"Nothing! Nothing at all!"

"Lister," said Cass pointedly, "you seem to be able to be very close-mouthed about some things, and to some people. I wonder how you are with women."

"What do you mean?" asked Lister, with a guilty premonition.

"Well, for example, you didn't happen to say anything to Miss Amber about the sailing of the fleet, did you?"

Lister flushed. He hadn't, of course; and yet she might have gathered it from some of his remarks. But then, what if she had?

"Of course not," he growled. "Speaking of the fleet," he added, "I'm going over to see Admiral Allen right now."

ARRIVED at the admiral's quarters, Lister came directly to the point. "Sir," he said, "I've been thinking about all these algæ. At the rate they are increasing, you may find your whole fleet stalled in a mass of jelly before you get to Behring Strait."

"I've thought of that," Admiral Allen replied soberly, and yet with a twinkle in his eyes which Lister couldn't quite fathom.

"But have you heard the latest reports, sir?" Lister persisted. "The Chicago River is clogged. The stuff is beginning to plug the water mains everywhere. I know it's becoming a nuisance here in San Francisco. In Texas, the Spanish moss is beginning to collect in masses heavy enough to break tree branches."

"All over the country railroad ties are turning into pulpy beds of assorted fungi, puffballs, and a hundred other varieties. The resulting decay has even caused derailings. In the moister areas, trains actually have to plow their way through vast accumulations of lichens, which have found the shaded cuts and half-decayed ties an ideal environment in which to exercise their new vitality."

"It's even worse in Asia," the admiral replied. "They say that on the

tundras the lichens are growing into heaps like haystacks on the railroads, and that the algæ have blocked rivers and caused floods. That's why, even at the risk of getting our entire fleet stuck in the slime, we must attack the Khan while this unexplainable growth of plants is endangering his source of supplies."

"I didn't know that," said Lister.

"Well, keep it under your hat, and don't breathe it to a soul. It is secret information that has just come in from the intelligence service. Have you any idea as to the reason for all this? I was just going to send for you, when you showed up."

"Something may have caused an abnormal increase in the ozone of the outer layers of the atmosphere, and this ozone may be filtering out those wave lengths of sunlight which ordinarily hold algæ in check."

But Admiral Allen was one of those practical men who have little patience with scientific explanations of anything. So he suggested, "Might it not be some new device of Asiatic warfare?"

"I hardly think so, sir. The Khan wouldn't use this weapon which appears to be hurting him even worse than it is us."

II.

THAT EVENING, when Dick Lister and Sally Amber were seated in a restaurant, she again broached the subject of the algæ.

"I hear it's even worse in Asia than in America," she said.

"How do you happen to know that?" he asked in surprise.

"It's so, then? Oh, everybody isn't so close-mouthed as you, Dick," she replied demurely. She raised her lovely dark, innocent eyes.

"Do you suppose it might be an Asiatic weapon? Or perhaps—since it seems to be even worse in Siberia than here—an American weapon?"

Embarrassed, he mumbled, "How should I know?"

"But you do know something about it, don't you?" she shot at him.

Caught off guard, he stumbled. "Eh? Oh—why, yes. The Beckerley fields ——" He broke off, frowning in irritation.

"Sally," he growled, "that curiosity of yours is going to get you into trouble one of these days. This is war time, and feminine curiosity is no excuse for pumping officers. I know that you are O. K., but others might not trust you. How'd you like to stand court-martial as an Asiatic spy, just because you ask too many questions?"

"Perhaps I am one," said the girl, smiling and raising her delicately penciled brows.

"It's no joking matter, Sally. People have been shot against a wall for less than that."

"I can see," said the girl dryly, "that Captain Cass has been lecturing you."

"How——" began Lister, then bit his lip.

"How do I know? Oh, I can read men like a book—any woman can. Captain Cass doesn't like me. And I don't like men who don't like me."

She pouted prettily.

"I'm glad he doesn't," declared Lister. "It would suit me if nobody liked you, but me."

HE RECALLED this conversation the next evening, when Cass strolled nosily into his laboratory, where he was working late over some analyses.

"Nice mess of algæ," Cass observed, squinting at Lister's experimental tank. "They say the stuff is clogging the Atlantic harbors."

"You could damn near walk across the Golden Gate this morning," Lister replied, and went on to detail the latest news: train schedules disrupted in the northwest, ships stuck in harbors every-

where, even in the open seas, particularly the north Pacific.

But Captain Cass was not listening. He was leaning over Lister's glass-topped desk, peering intently at something beneath the glass—a snapshot.

"What's this?" he asked sharply.

"Just a snap of Sally. Not a very good one; print's blurred."

"Um!" said Cass. His eyes narrowed. Then he said, irrelevantly, "Have you any theory about what's causing all this growth of algæ?"

"Yes," Lister admitted, pursing up his lips judiciously. "But I'm not going off half-cocked. When I've verified certain points, I shall report to Washington—not to the intelligence service."

"Well, seeing as you won't tell the intelligence service anything, the intelligence service will tell you something—and for your own good. Listen carefully, and don't fly off the handle: I was attached to the Harbin legation three years ago, before the war. I got to know a lot about the Khan's eastern capital. Maybe you never heard of the woman called Princess Stephanie—or did you?"

"Yes. What about her?"

"Wait a minute. Stephanie was the daughter of Dmitri Kazarov, the Khan's chancellor. He was killed fifteen years ago in the Japanese revolution, and the Khan himself took over the raising of Stephanie. It wasn't given much publicity, but, in a town like Harbin, people talk, and they were still talking when I was there. It seemed the Khan gave her a queer education—a very queer one."

"What do you mean?"

"I mean he raised her to be the greatest spy in history. She was taught every important language, and to speak each like a native. She was taught to be at ease in every situation and every level of society. She learned military science, so as to be able to identify important information. And, when it be-

gan to be evident that she was going to be a very beautiful girl, she was even taught the knowledge of human nature! But above all—above all, I say—she learned to be cold and heartless, and immune to love. She can act the part of a woman in love, but there is no feeling in her—no feeling except the desire to serve Asia!"

"But I don't see——"

"You will. When Stephanie was sixteen—that was three years ago, when I was in Harbin—the Khan forbade her to appear in public, lest foreign residents learn her features and impair her usefulness. When she rode out-of-doors, no one was permitted within five hundred feet of her, and no one save her palace intimates really saw her face.

"But"—Cass grinned aggravatingly—"I happen to have extraordinary eyesight, as a copter observer should, and I used to watch her from the prescribed distance. Once I even turned a pair of night glasses on her. She was a beauty, all right."

"I begin to suspect, sir," said Lister grimly, "that you're about to say something you're going to be sorry for."

"Perhaps. Anyway, since the war began, there have been a lot of rumors about a brilliant feminine Asiatic spy—the Nightshade. It's my opinion that the Nightshade is the Princess Stephanie, and as for the rest, I know only this—that Sally Amber looks like Stephanie!"

"You're utterly insane!" blazed Lister. His voice rose. "It's ridiculous! Sally's no Asiatic. Does she look like an Oriental? Her skin is as white as marble—when she isn't sun-tanned, I mean. Her speech is thoroughly American. Her eyes——"

He stopped; suddenly he had visualized Sally Amber's eyes—dark, pure, lovely; but, beyond doubt, with the slightest possible oriental cast.

"Exactly!" declared Cass, in reply to Lister's unspoken thought.

"Lieutenant, how long have you known this girl? Are you sure that her tan is tan, and not her natural color? And isn't she about the right age? And doesn't she spend a lot of time cultivating the friendship of people like you, who possess important military knowledge? Whether she gets anything out of you is a different story, but you ought to know whether she tries, whether she ever asks leading questions, or anything like that."

"She doesn't!" snapped Lister, then groaned. He himself had chided the girl more than once on her curiosity. "Look here, captain," he said, "if Sally is an enemy spy—it's inconceivable—but if she is, I say, it's America first with me, much as I love her. Lay off of her, will you, and let me find out."

"I'm not so hard-boiled and pitiless as you think."

"How do you——"

"How do I know what you think of me? Because it's my business, as an intelligence officer, to know what people think. But, as I was saying, I'll trust you. I'll give you your chance. I'm flying to-night on a certain mission, and shall not return for two days. Until then, the case is in your hands. But, if you have not solved it by then, I shall take it over."

LISTER'S mental turmoil brooked no delay. Despite the fact that, if Sally were dining out, she must have already left, he rushed across town to her apartment. She—or some one, at least—was home, for the library lights were glowing. He ignored the slow automatic elevator, and dashed up the four flights of steps to her floor.

He arrived in front of her door breathless and perspiring. There he paused, striving to calm himself.

Suddenly, he was aware of voices beyond the door. He listened, but it was impossible to distinguish words. He

fancied he heard the tones of a man, but even that was not a certainty.

He rang the bell. There was a sudden silence in the room beyond; and then, after a considerable interval, the sound of footsteps. Sally herself opened the door, her face seeming strained and tense. But she smiled as she recognized Lister.

"Dick!" she exclaimed. "What's the matter? You're breathless!"

He strode past her. The room was empty of occupants, save for Sally and himself. "To whom were you talking?" he asked grimly.

"I was using the televisiphone. Why?"

"I thought I heard a man's voice in the room here."

"Dick!" she said reprovingly. "I had no idea your jealousy would lead to such imaginings." She looked up at him with her dark eyes sober. "You know you have no cause to be jealous."

"It isn't that," he replied miserably. Suddenly he burst out, "Sally, what were you doing in Harbin three years ago?"

If there was a momentary flicker in her eyes, it was almost imperceptible. "Why, I was traveling. You know I love to travel."

"You say you saw the woman Stephanie there," he pursued. "Did any one ever tell you that you looked like her?"

Decidedly her eyes widened now. "Why—yes. Of course I've heard that. But, Dick, you don't think——" She laughed. "How absurd! You don't think that I'm the Nightshade, do you?"

"Who said anything about the Nightshade?" he snapped. "How did you know that Stephanie and the Nightshade are the same person?"

"Why, everybody hears those rumors, Dick."

"You mean that you hear everybody's rumors," he returned grimly. "Why are you so interested in everything that

has to do with the war or the service—everything from fleet sailings to algæ? Sally, you're not telling me the truth."

"How ridiculous!" she indignantly declared. Then, suddenly, her mood changing, she moved close to him, looking up at him out of innocent, dark eyes. "You trust me, don't you?"

"Heaven knows I want to!"

Her lovely, provocative lips smiled. "Then kiss me!" she whispered.

He obeyed, fiercely. As always, her lips burned like soft fire, but, suddenly, she threw back her head, and thrust her hands against him, as though to push away from his embrace. One of her scarlet finger nails drew a sharp gash across his throat. With hurt surprise in his eyes, he released her.

"You—were hurting me," she explained, apologetically. But her eyes were watching him like a cat. "I'm sorry I scratched you."

"It's nothing," he muttered. He felt curiously dizzy—no wonder, he thought, in the grip of such violent and opposing emotions. But abruptly he found himself sitting in a chair with his head on his hands, and the room seemed to gyrate around him like the cabin of a copter.

Through a haze of dizziness he heard a man's voice, and then Sally's in answer. "No, no," she said. "This was much better. If I'd called you there would have been a fight and a disturbance, and see how peacefully he sinks into stupor."

"I bow to you, Kazarovna," said the man. "There is but one Stephanie."

"I am glad that it turned out as it did," said Sally's voice. "He is the one who knows about the algæ. And now Asia shall know."

III.

WHEN next Lister was aware of a world about him, it was a world of a most unstable nature. Minutes passed

before he realized that he was in a plane, soaring over an apparently endless expanse of brilliant white clouds. There was a further interval before he perceived that Sally Amber was sitting, calmly smoking, beside the man who piloted the machine, and that he himself was handcuffed very effectively to the aluminum arms of his seat. His head ached dully. Then, full realization dawned upon him. He was a prisoner in the hands of agents of the Khan.

His movement caught the girl's attention. She rose and made her way to the seat facing him.

"I hope you're not feeling too ill," she said gently. "I'm sorry, Dick. Drugging you was necessary."

"Then it's true!" he groaned. "You are the Nightshade—a sneaking Asiatic spy!"

"Like a sneaking American spy," she retorted. "Dick, I serve my country in the best way I can, just as you and that Cass person and the rest of the Americans serve yours."

She smiled. "He's a clever fellow, that Captain Cass. I'm afraid his suspicions will damage my value in America."

"Well, not until——" He bit his lip, and hurried on, "Of course he will. He'll get those snapshots I have of you, and turn them over to his department. You're cooked as a spy from now on, Sally."

"Oh, not that bad," she said. "You forget that every picture you have of me was taken with my camera. My camera is a very queer little mechanism; when I use it, it takes sharp, clear pictures, but when my friends use it, somehow the prints seem to come out blurred. Or hadn't you noticed that?"

He had, of course. He asked glumly, "Where are we headed for?"

"Asia," said Sally.

"Yeah, I thought so, since we're in a plane instead of a copter." Pound for pound and horse power for horse

power, Lister knew that the planes were still more efficient than the copters, and the fact that Sally was using a plane meant a long flight.

"Why?" he asked, after a moment's silence.

"Don't you know? Because we have to have certain information from you. I'm sure it won't do any good to offer you safety for it, Dick; but I can promise, if it makes any difference to you."

"It doesn't," he responded grimly. "I won't sell my country for my personal safety. Anyway, I haven't the least idea what information you think I can give you. Your bacteriologists are as good as ours; our epidemics haven't been any more successful than yours."

She shook her soot-black hair. "Not bacteriology nor epidemics, Dick—algæ!"

"Algæ! Why?"

"Because you know the causes of this plague of slime in water, and lichens on land. It's an American weapon, and Asia needs the secret. It means everything—everything to us!"

"Indeed?" he said guardedly. "Why everything?"

"Don't act so innocent, Dick. You know quite well what the plague of lichens is doing in Siberia. It's clogging the rail lines, and the algæ is blocking the rivers. You know how important it is to keep our Alaskan expeditionary force supplied with coal and oil to power the Beckerley fields, and you know that if our fields fail for lack of fuel, the war's over. We're licked."

"You Americans use Alaskan coal, but our coal has to come all the way from the Stanovoi Mountains, either by water across the Sea of Okhotsk, or by rail up through Dezhnev. And it's becoming impossible to keep the rails open; Siberia is being strangled by your accursed lichens."

"Well, what about the water route?"

"Water! Ships are stalled all over the seven seas. Look there!"

AST-2

He glanced through the floor window at the Pacific, five thousand feet below, visible now through a vast opening in the clouds. The sea had a curious aspect; it was not blue, but brilliant grass-green. Peering closer, he made out two tiny vessels idle on the surface.

"As bad as that!" he muttered, wondering what was happening to Allen's mighty fleet. Would the admiral attempt to cross the choked ocean? To Sally he said, "That's fine. The more strangled Siberia gets, the better it suits me."

For the first time in their acquaintance a sign of irritation showed in her face. "It won't be for long!" she snapped angrily. "We'll get the secret out of you. Make no mistake about that, Dick."

"And you," he said thoughtfully, "are sweet little Sally Amber, who said that she loved me."

Suddenly, her face was gentle. "And if I do love you?" she murmured. "If I do, would that make a difference to you, Dick?"

He laughed bitterly. "Do you think I'd believe you now? I know all about Princess Stephanie and her education. If you love anybody at all, it's the Khan!"

"Not the Khan, but Asia," she said. "The Khan is nothing to me, except for what he means to my country. For he himself, Dick, trained me from childhood to be immune to love. And yet—and yet, Dick—I have never met a man whom I—like—as I do you. You mean less to me than Asia, but more to me than any human being in the world."

"And that," he sorrowfully asserted, "is another one of your pretty lies."

For a long moment, she was silent. "No. It isn't a lie," she said at last, rising and returning to her place beside the pilot.

SHE ADDRESSED not another word to Lister until seven hours later,

when they were soaring over Honshu, and snow-ripped Fujiyama slid beneath. Then she returned to the seat facing him, smiled very gently, and said softly, "I am terribly unhappy about this, Dick."

"Humph!" he said. "You ought to be triumphant."

"But I'm not. Listen to me, Dick.

"You ought to have thought of that last night."

"But I can save you from it. If you'll tell me what I want to know about the plague of algæ and lichens, I'll guarantee your safety. Isn't that the best way—for both of us?"

"No, Sally. I'm not saying that I have the information you want, but you



*It was sickening—disgusting—the slow heaving of the slime—
as if the vast expanse were breathing!*

The Khan's intelligence division is not gentle. A number of the operatives are Mongols, and their methods of extracting information do not include kindness. It hurts me to think of you under torture, Dick."

can be sure that, whether I have it or not, I'll never tell Asia anything that might help."

She sighed and left him, but her glorious, dark eyes were troubled. They were still troubled when the great

Khingan range loomed on the horizon, and the plane slanted down into Harbin. She even seemed to pale when at last a slant-eyed guard took the key from her, and released Lister from his seat; and she followed the grim parade, as half a dozen men herded him into the centuries-old stone fortress that served as a military prison.

as he thought of the wild mistake that had led to his abduction. The algæ and the lichens! Asia strangling in the grip of a plague that arose from so simple a cause that—if he told—a schoolboy could see the remedy.

Luckily for America, the cryptogams flourished most luxuriantly in Asia; and, until he told, all advantage lay with



She did not enter the dark stone-walled cell; but, as the door swung shut, Lister glimpsed her pale face in the corridor. Her lips formed a silent phrase; he could have sworn that it was, "I'm sorry."

Well, it was too late now for her sorrow to help him, even if he believed in its sincerity. And he smiled bitterly,

the Western continent. Until he told! He ceased to smile, and set his jaw grimly. He was not going to tell. Torture or none, he had to be strong enough to keep silent.

Hours passed. He heard conversations in the corridor outside, but they were in some Asiatic tongue, and meant nothing to him. Then a chance colloquy,

in *lingua Franca* told him that the Khan was not in Harbin, but was still with the troops on the Alaskan front. At last a guard brought him a jug of water, slimy-green with algæ, and a slab of coarse bread; but this man, a Mongol, spoke neither English nor *lingua Franca*, or at least refused to speak them.

It was deep night when four grim Orientals and a stolid Siberian led him from his cell to a chamber that seemed sunk far underground. A single, dim electric light illuminated it, and a dozen pairs of cold eyes surveyed him—and one pair that was not cold. Sally Amber sat at the head of the narrow table, and she met his gaze with eyes that were wide, troubled, and apprehensive.

Then she addressed him. "Dick," she said softly, "I have told the interlocutory committee that you will give them what knowledge you have concerning this plague of mosses and algæ. They have promised me your safety if you tell, and I have assured Comrade Plotkin that you would."

"Then, as usual, you lied," said Lister grimly.

Plotkin spoke out of the depths of his beard. "You see, Kazarovna," he rumbled, "only one method works with these stubborn American apes. I think it best we try that method."

"Oh, no!" gasped Sally Amber. "Let me question him first. He'll tell me. I can get it from him. Please——" She broke off suddenly as Plotkin's icy eyes surveyed her curiously.

"Will you tell?" he asked Lister, and then, at the latter's stubborn silence, "Very well. The pincers under the armpits first, I think. An ounce or so of flesh from the proper places can sometimes unblock the stream of information."

SALLY—or Stephanie—choked back a sob and covered her eyes. The four Mongol guards forced Lister's arm up-

ward; for a moment, he struggled, but realized instantly that it was utterly useless. The stolid Siberian seized a glittering little instrument, and the pincers tore a ragged tatter of flesh from his armpit. He bit his lip fiercely to suppress the groan of pain that sought utterance, but there was no sound in the chamber save Sally's stifled sob.

"Why so unstrung, Kazarovna?" asked Plotkin amiably. "Surely the Princess Stephanie has witnessed more extreme measures than this."

She smiled wanly. "Of course. It's just that I haven't yet recovered from my sojourn in America—a—a horrible place!"

Plotkin nodded and turned back to Lister. "Shall we try it again?" He smiled. "Or would you prefer a variation?"

"Neither," said the biologist, "I'll tell." Impassively he met the startled, relieved, unbelieving eyes of Sally. If she was acting, he thought, it was certainly good acting!

"Good—good!" rumbled Plotkin. "You're much wiser—or at least less stubborn—than some of your countrymen whom we have found it necessary to question. Now then, let us hear the secret."

"You'd better take this down carefully," said Lister. "It's rather intricate."

He waited as Plotkin spoke in Russian to a man at his side, then began: "The plague of algæ and lichens," he said slowly, "is due to the great increase in numbers of thallogens. If the confervæ were checked, the trouble would disappear."

"And what," barked Plotkin, "are 'thallogens'?"

"Thallogens are the third grand division of the cryptogamia. The group consists of the ulvæ and fuci, besides the confervæ."

"Can't you put that in understandable language?" snapped Plotkin.

"I can express scientific information only in the language of science," said Lister, his eyes on Sally's fascinated one. "Your own scientists will have to translate it for you."

"Is that all?" asked the Siberian eagerly.

"That is all. Reduce the confervæ, and there will be less thallogens. And when there are less thallogens, the algæ and lichens will cease to trouble you. It's really very simple."

"Take him back to his cell," rumbled Plotkin. "And this had better be true, my friend, unless you crave further treatment."

"Every word of it is true," Lister asserted.

It was still deep night when, three hours later, the door of his cell opened, and a slim figure slipped stealthily in. For a moment he thought it was a boy; then he recognized Sally, wearing the shorts and rolled hose of a copterman. She closed the door quietly behind her, then rushed abruptly into his arms.

"I can't stand it!" she sobbed. "Why did you do it? Plotkin is furious—insane with rage. He'll have you rotted bit by bit with acid! He'll—he'll— Why did you trick him, Dick?"

Lister looked down into her white face. "Is this acting, too?" he asked coolly. "After all, the Princess Stephanie, the Nightshade, isn't supposed to be able to care what happens to a man."

"But I do! I love you, Dick. I care for nothing except you and Asia, but I can't bear to see you killed or tortured even for Asia." She paused, suppressing her sobs.

"Plotkin is wild," she said. "He wired a copy of your statement to the university at Tsitsihar, and back came the scornful reply that all that your words meant was that the plague of algæ is due to an increase in the amount of algæ."

He smiled. "Well? Isn't that true?"

"Yes, but—— Oh, Dick, it's becom-

ing horrible! They've kept the cities supplied with water by adding calcium chloride to the supply, but all through the country—all through the world, I guess—wells are choked and rivers smothered, and oceans have become heaving masses of slime. And on land the mosses spread like flames of gray fire!"

He was still suspicious, though he held the girl tightly in his arms. "Is this an attempt to play on my sympathies?" he asked. "I warn you, Sally, I'll tell you nothing."

"I don't care whether you do or not! Don't you understand, Dick? I love you!"

"If you love me, you'll help me escape from here."

She pushed herself out of his arms, and stared at him with indignation at his disbelief. "And why else do you think I came?" she asked in a very low voice. "Follow me, quickly, before Plotkin cools down enough to put his mind on the details of your torture."

She stepped to the door, rapping sharply. It opened instantly, and they passed into the dim corridor beside a young Russian guard who looked at Sally with tragic eyes. She spoke softly; the man extended his bared arm, and the girl scratched it hastily with one of her finger nails. Lister watched the man as he sank slowly into a limp sprawl on the floor.

"Thus it will seem like American trickery," she whispered. "But I am afraid he will die for treason, none the less."

"Why did he do it?"

"Because," she said simply, "he loves me."

LISTER followed her up a narrow flight of stone steps, wondering how many of the barred doors in the corridor hid American prisoners. At last, she paused. "Wait here," she whis-

pered, and moved from his view along a passage.

He heard a low-voiced conversation in Chinese, and then Sally was at his side again. "Come on," she called softly. "I've sent this one with a fake message to Plotkin."

Lister followed her up yet another flight of steps, and emerged suddenly into starlight. They had attained the roof of the structure, and he glanced apprehensively at the lights of Harbin all around. Sally was slipping toward a copter, a tiny, single-man observer.

"Quick!" she breathed, "get in."

"Both of us?" He frowned doubtfully at the tiny craft.

"We must. For I have to show you what to do. This alone would not carry you far."

He crowded in beside her. The tiny cabin swung like a pendulum as the vertical screw whirled and whined, and bored its way heavily aloft. Sally flashed her green passage light, waiting anxiously for the reply from the ground.

"There!" she exclaimed in relief. "They've turned off this section of the Beckerley field. I have a pass, but if they had discovered your escape they might have blocked all passage—especially mine, I think; for I am sure that Plotkin has ceased to trust me."

The craft whined into darkness. The lights of the city diminished and dimmed; and, at last, Sally relaxed, leaning more comfortably against him in the close quarters of the cabin.

"We're beyond searchlights at last," she said. "Now they'll have to wait until dawn to pursue us, and by dawn we might be anywhere in this half of Asia, for all that they can tell. If this corkscrew only holds together——"

It did. When the red sunrise flashed up on the sea, they were directly over a narrow promontory that struck south into the waters. Lister gasped as he saw those waters, for surely this was

the most amazing sea ever glimpsed by earthly eyes, at least since the plesiosaur looked over the oceans of the carboniferous age hundreds of millions of years ago.

It was a brilliantly smooth, green sea, seeming at first as motionless as turf. But, as the copter dropped toward the beach, Lister could distinguish motion, a slow heaving of the slime as if the vast expanse were breathing. There were no breakers, for the algæ had at last tamed storm and wind, and the seas permitted the wind to slip as smoothly above them as if the waters had been covered with a film of oil. The one thing that sent a tremor of disgust through Lister was the sight of sea birds stalking dismally over a crust of slime that had dried enough to support them, gobbling up billions of flies.

SALLY wasted not a glance on the scene. "The south cape of Taiwan," she said, as the copter grounded on a slimy beach, "or, as you call it, Formosa. There's a boat here——"

"A boat? How can we use a boat—in that?"

"Listen a moment. In that shed, there's one of the experimental side-wheelers, a quick adaptation by our scientists, who had foreseen this outcome, if the algæ were not checked. Side-wheels can push a light hull right over the algæ. They don't foul like propellers. This one has a dynoline engine, and a range of about a thousand miles."

"A thousand miles! I can't get anywhere on that!"

"You can get as far as I want you to get," she retorted with narrowed eyes. "You can reach Hongkong—that's British—or you can make Haiphong in French Indo-China. Hongkong is much the closer."

"But they're neutral! I'll be interned, if I go into a neutral port. I

want to get back to America and my job."

"And I," said Sally softly, "want to see to it that you don't. I'm being enough of a traitor to Asia now, without letting a dangerous enemy like you return to service. All I want is to see you safe, Dick."

She turned away, and he followed her to the shed she had pointed out. There was the boat, true enough, a thirty-foot, open affair with six-foot paddle wheels like a miniature old Mississippi side-wheeler.

"Do you see this?" asked the girl, indicating a curious device of twisted glass tubing. "That's a sun-alembic. You put sea water in it, and the evaporation creates a partial vacuum in which the sea water can be distilled for drinking. The sun does it, just as it does with the rain.

"Under here is concentrated food for about a month. Can you take care of a dynoline engine? If the algæ clog the cooling coils, you must stop and clean them at once."

"I know all that, but what about you, Sally? Will you be safe after this?"

"I can take care of myself." Her tone was confident enough, but Lister could see that she was under a terrific strain in this struggle between duty and desire. "Oh, Dick," she said shakily, "if this war is ever over——"

"It won't be long now. As soon as the Khan's supply of fuel to Alaska fails him, he's ended."

"Ah, but he's laying——" She caught herself, flushing miserably.

"Laying a pipe line, eh?" finished Lister. "I rather thought he would. He'll power the Beckerley fields with oil, eh?"

Sally laughed bitterly. "The downfall of the Nightshade!" she declaimed. "No wonder they fear love in a spy. Dick, that is the first slip that I've ever made, and my one consolation is that long before you can get to any place

from where you could send that information to America, it will be too late. The work will be completed and protected by fields. And so—good-by."

With the feel of her lips still on his, he watched the copter flutter its way into the north; then turned to the craft he was to use, whose only name was a Chinese ideograph. It slid easily into the slip; and, without further hesitation, he started the engine, engaged the paddles, and was on his way.

His progress was a queer species of locomotion. The blades threw up vast lumps of green slime that fell behind with sullen, splashless *plumps*; and the light craft thrust forward by the incredibly powerful dynoline engines, slid easily along the surface of the magot-infested slime. It was not unduly slow; he judged that the boat made twenty-five knots.

Formosa was a receding shadow when he passed the first stalled ship. This was a Dutch freighter, and the crew—or what was left of them, since many had doubtless been put ashore by copter—crowded the rail to watch his passage. He waved, but there was never a sign of response.

Suddenly, he realized the cause of the grim silence; his craft bore gold and purple stripes—the colors of the Khan—and the Dutch, with Borneo, Celebes, and New Guinea in the very shadow of the vast Asiatic Union, had no love for the Khan.

His coil clogged, and he paused to clean the slime from the screens. It was at this moment that the idea struck him; he sat suddenly erect, staring eastward where the China Sea met the mighty Pacific. Why did he have to go to Hongkong or Haiphong—or any neutral port, for that matter?

What other possibilities were there? He glanced at the map of the East Indies, affixed to the cowl of the motor. There was Luzon, of course; but the Philippines, during their half century

of independence, had grown far closer to Asia, in sympathy, than to the United States.

There were the Marianas, where Admiral Allen had all but annihilated the Asiatic fleet, and where surely there must be an American garrison, if he could but reach them. But the Marianas lay two thousand miles out in the Pacific, close to Guam. He had fuel for half that distance, but——

HE SWUNG the craft about and set it lurching back toward the Dutch freighter. The maintenance crew watched him sullenly as he approached. He pulled close under the hull and shouted, "Any of you understand English?"

A man pushed to the rail. "Yes! What do you want?"

"Listen! I'm American, not Asian. Look!"

He was not in uniform, since the biological branch did not require it, but he displayed his identification tag, with its red-white-and-blue shield plainly visible.

There was a stir. "What do you want?" asked the man above him, but in friendlier tones.

"Just some information. I want to know if there's an American or British ship stalled between here and Guam. I want to buy some fuel. You been in touch with any?"

There was a long conversation in Netherlands dialect. At last Lister's informant spoke again. "De Britisher *Resolute*—she stuck—by latitude 21'20" and longitude 135'60".

Lister looked at his map, marking the position. It would do; it was almost exactly a thousand miles east of his present position, and might be a close gamble with his fuel, but it was worth the try. If he reached the Britisher and got fuel, he could then certainly make Guam or the Marianas, and give

to the American army the news that the lichens had blocked the Siberian railroads, thus cutting off the fuel supply to the Khan's Alaskan Beckerley fields, but that the Khan was frantically laying a pipe line.

Between the giving out of the Khan's coal supply and the arrival of his first oil, there might be a brief gap of time, during which his Beckerley fields would be dead. If America only knew this, and could strike then, the war would be won. Lister must try to get the information to America in time!

So he set the boat lurching away into the east. Little by little, the Dutch ship faded toward the horizon, and Formosa was a dark cloud sinking ever lower. At last he was alone on a dead, green sea that barely moved, and his passage left no wake save a slightly darker green scraping, that slowly closed behind him. No fin cut the slimy surface, and but few birds soared, for their slime-bred prey was too abundant to draw them far from land.

He set his course carefully on a great circle, to conserve his fuel. The malodorous slime sickened him with its stench. The perpetual lurching of his craft added to his nausea. Day faded into a starry darkness, and darkness into day.

He made it. At the second midnight, with scarcely a pint of dynoline remaining in his tank, the lights of the *Resolute* flashed out of the darkness.

But convincing the captain was almost as difficult a job as the passage itself.

"It's deuced irregular!" That official grunted. "We're neutrals." But at last, because England had India and Papua and the Malay States, and hated Asia and all its component parts by tradition and policy, the British captain acceded to Lister's request, and Lister set out again with a full tank.

He had tried to get the captain to

send a code message by radio to America for him, but to that the captain had proved adamant.

IV.

EARLY NEXT MORNING, on glancing back, he spied a plane, winging swiftly out of the shadows that still clouded the west and the distant China Seas. Soon it arrived, and circled far above him, then slanted downward in a wide spiral. The double-headed golden eagle of the Khan's air force glittered on its wings.

The machine swung close. An arm waved vigorously, gesturing in the direction of the west. The pilot was ordering him back.

Lister stared with narrowed eyes, but permitted his boat to jog right ahead. He was not going to be turned back so easily as that. All the same, he had a feeling anything but comfortable, for he was completely at the mercy of the Asiatic aviator, should the latter choose to use bullet or bomb.

The plane circled again. Suddenly Lister realized with a start of amazement that the craft was attempting to land—to alight on that sticky mass of heaving slime! It was impossible!

But the plane seemed able to achieve the impossible. Its pontoons skipped lightly over the treacherous stuff, bounding toward him. It was all but down safely, and then—then the inevitable! Either the plane dipped or the sea heaved—Lister could not tell which—and the idling propeller struck a mass of green slime. Very gently, the plane lifted its tail and nosed over, the green corruption spewing from the spinning blades. And the pilot—for a single instant Lister had a clear view of the form that was catapulted through the air—was plunged into the impassive algæ. All that remained was a quickly filling depression and the sinking plane.

But he had seen enough. Sally Amber! It was Sally who struggled somewhere in the depths of that nauseating sea. And he—he was as helpless to aid her as though he were a thousand miles away.

He spun the wheel; the boat bounced and jogged toward the spot. As near as he could bring it without disturbing the gradually closing dent in the slimy surface of the sea, he halted the craft. He seized the twenty-foot rope fastened to the bow, and tied one end of the rope firmly around his arm. Then, fixing his gaze on the spot, he plunged down into the slime.

It was like trying to swim in heavy oil. To move his arms at all required a great effort, and then he was not sure whether he was going down, or up, or sidewise, or was just churning. The stuff clogged his nose, his eyes, his ears—even his mouth, when in an unguarded moment he opened it.

His hand struck something solid. It was an instant before he realized that it was Sally's ankle. He clutched it in a grasp of desperation, and gave a yank on the rope tied to his arm. Pulling in on the rope was difficult, as he had only one free hand with which to work. Once he lost hold of the rope in the slime, and had to start all over again, groping along it from where it was tied to his arm.

He scarcely knew when he reached the surface, so thick was the coating of muck he carried with him. He thrust the girl across the gunwale, and then had to stop to clear his nose and mouth before he could even breathe. He clambered into the boat.

Sally was not unconscious, but her nausea made her almost as green as the algæ she clawed out of her eyes.

"Thank you, Dick," she said, "for the rescue. I'm ashamed that I needed it."

"Why are you here, Sally?"

Her eyes hardened a bit. "Why are

you here, Dick? I told you to make for Hongkong or Haiphong."

"But I didn't promise to, Sally."

"Perhaps not, but do you think I can let you get to an American ship or port, with the information you have? It's bad enough that I let it slip, and that I helped you to escape, but I will not play traitor to Asia any further than that! Do you understand?"

"How'd you find me?"

"It occurred to me, after I left you, that you might try just what you did. I got back to Harbin before Plotkin thought of connecting me with your escape—if he's thought of it yet—so I was able to get a plane. I flew over the China Sea between Taiwan and Hongkong, until I was sure you weren't on that route. Then I flew east.

"For two days, I've been scouring this area. You see, I anticipated that you'd head for Guam. But now, Dick, you're going where I say. We're going back to Luzon. The Philippines are neutral, but they're friendly to Asia, so I can have you interned there, and yet, with a little influence, go free myself. Start your engine."

He did. The boat took up its eastward course.

"Turn about!" she snapped. When he merely smiled, she reached suddenly into the bosom of her aviator's shirt and produced a tiny Japanese automatic, one of the diminutive nine-caliber, but deadly with its high-velocity, chrome-jacketed bullets. "Put about, Dick!"

With a movement so casual that she was caught completely off guard, he kicked the weapon from her hand, and it spun off into the slime. "We go my way, Sally," he said quietly.

She sobbed, "I ought to have killed you! But I couldn't, and this is the result."

Abruptly she turned her glorious deep eyes upon him. "Dick, do you

know what will happen to me, if you take me to Guam? You know what they do to spies! Do you want me to be shot against a wall?"

"Lord!" he muttered. "I didn't think of that. Listen, Sally. The Pelew Islands are Japanese, and they're not far off my course. I'm going to land you there about midnight, and you're going to be thoroughly bound, and very tightly gagged, so you can't rouse any pursuit. After the war is over, maybe you will forgive me."

"I forgive you now, Dick," she said softly, but with a puzzling note in her voice. "The Nightshade is dead. I'm no good as a spy when you're involved. But I warn you that I shall still try to defeat you!"

He swung the boat onto its new course. "If you can, Sally."

SUDDENLY he noticed something which altered all his plans! Staring out over the horrible, slimy sea, he noticed a change. In addition to the green, there were now vast patches of brown—of dying algæ!

For a moment he failed to grasp the significance of this. Then, so suddenly that Sally jumped, he shouted, "I see it all now! It has happened!"

"Wh-what?"

"The Khan's Beckerley fields are off in Alaska! His Siberian railroads are blocked at last by the fungi! He's out of fuel! It can't be our fields that are off, for our coal mines are too close behind our lines to be cut off in this way."

"How can you know that any Beckerley fields are off?" asked Sally.

"The—the——" He caught himself, then proceeded, "We're not going to Pelew Island, after all. We're going to Guam. This information can't wait; for, if the American lines know it and advance at once, the war's over. Our Beckerley fields are on, and yours are off!"

"How—how do you know?"

"I'll tell you, for it can't do any harm now. You wanted to know what I knew about this plague of algæ, didn't you? Well, I'll tell you, Sally. It isn't an American weapon; it's an accident!"

"An—accident?"

"Yes, or a by-product. It's the result of the Beckerley fields. I got the hunch when I learned that the center of the trouble seemed to be Alaska. Up in Alaska there are two enormous fields of force within a few hundred feet of each other, ours and yours. Between them is a hundred-mile-long zone of terrific electrical strain. What's the result? Ozone! Tons of ozone pouring up into the air, until the very envelope of air around the earth was affected.

"The normal ozone content increased, and this layer of ozone around the earth cut off the sun's death rays which had been maintaining the balance of nature. Relieved from the restraining influence of the death rays, the cryptogamia—the lichens and fungi and algæ—increased to abnormal quantities.

"But it's over now. Ozone is unstable and goes rapidly back to normal. The ozone in the air is decreasing. The death rays are getting through again.

"How do I know? Because the algæ are dying, and that can mean only one thing—that there are no longer two Beckerley fields opposing each other in Alaska, pouring ozone into the air. There is only one Beckerley field—ours. The Khan's shield is gone, and all we need do is advance!"

Sally was very pale now. "I wish you hadn't told me this," she whispered. "Oh, Dick, don't you see that it means that I just have to stop you? If you love me, throw me into the slime of the sea, for I'd rather die than live these next few hours trying to kill you!"

His triumphant face sobered. "Hours?" he echoed. "It will take us three days to reach Guam. Sally, when

I need sleep, I'm going to tie you up. And I hope you don't resist, because Lord knows I don't want to hurt you."

But she yielded quite submissively when, a few hours later, he twisted the painter rope about her wrists and ankles. He remembered her trick of the drugged finger nail, and carefully avoided giving her another similar opportunity. Then he set and locked the gyro steering compass, and curled up on one of the seats to sleep.

When he awoke, the boat was still slapping along across the slime. Sally was still securely tied and apparently in the same position, but the bottom of the boat was wet with some colorless fluid.

"What's this?" he snapped.

"It's your fuel," said Sally triumphantly. "I drained the tank."

He gasped! But in a moment he broke out in a chuckle of relief. "That isn't dynoline," he said. "That's the fresh water from the sun-alembic I was saving against a cloudy day. The water tank's air-tight, and the algæ can't get in."

Sally sagged despondently in her place. "Will you untie me?" she asked dully. "I'm very cramped."

HE VENTURED an attempt to sleep only once more, and this time lying full length against the fuel tank, while he bound Sally not only hand and foot, but lashed her to the gunwale as well. And when he awakened, she had kicked the sun-alembic to bits.

"Why'd you do that?" he asked angrily. "Although we don't need water for the one day that's left to travel, it would be a convenience."

"I did it so that if we miss Guam we'll be dead before some scouting American plane happens to run across us."

"We won't miss Guam," he promised grimly.

As the hot, stinking day wore on, the

grueling grind began to tell on Lister. All about them the algæ was turning brown, and the stench was almost unbearably nauseating.

"I'm going bats," he told the girl. "A crazy poem keeps hammering at my head. I've got to pass it on, or I shall go bats. Did you ever hear the short-short-short story about Algy? All this rotting algæ is what suggested it to me, I guess."

Sally turned intent catlike eyes on him, aroused from her lethargy by the possibility of his cracking.

"Go on. Tell it to me," she urged insidiously.

He laughed harshly, discordantly, gave his head a violent shake, and ran the back of his hand across his tired eyes.

"It goes like this," he said:

"Bear met Algy.
Bear et Algy.
Bear was bulgy.
Bulge was Algy."

Suddenly, he gave a wild laugh. "That's all wrong this time!" he declared. "By Heaven! The bear isn't eating Algy this time. Algæ is eating the bear—the Siberian bear. We've got them licked, if we ever reach Guam."

"We never will reach Guam," the girl taunted him.

"Won't we?" he exclaimed. "Look! A low shore line showed in the darkening east. 'Guam!' he announced, sober and sane once more.

Sally was disconsolate. "I've lost, then," she whimpered. "Please, Dick, be kind to me, and—let me kiss you now, in case anything happens."

He knew what she meant. He had worried enough over the question of what would happen to the lovely Nightshade; for, despite his assurance, he knew that Captain Cass was aware of Sally's identity. The two days of grace were long since up. Cass would have

reported the circumstances of Lister's disappearance.

Cass' description of Sally, together with the blurred photographs in Lister's office, would certainly identify the girl. Nothing could save her from a wall at sunrise. So he drew her into his arms with a tenderness born of despair.

Just in time he realized her intent. He caught her wrist as she struck with her drugged finger nail at his throat.

"Damn you, Sally!" he blazed. "Now I'm going to give you a dose of your own medicine. There's only one way you're safe to have around, and that's unconscious!"

But she read his purpose. Before he could seize her forefinger, she had clenched it into a stubborn little fist, and she fought him with a strength that was amazing. But at last he saw the way: disregarding her blows against his face, he slowly, inexorably, crushed her clenched fist in his hand. She cried out in pain as her own finger nails were driven into the flesh of her palm, and then, suddenly, her eyes widened, fluttered, and closed, and she sank first to her knees, then in a limp heap at his feet.

IT WAS DEEP NIGHT when he carried her up the side of the U. S. cruiser *Dallas*, stalled in the algæ off Agana. Thrusting her into the arms of the ship's surgeon, he rushed to report to the commanding officer his information: that he knew, from the browning of the algæ, that the Khan's Alaskan Beckerley field was off. The message did not need to wait for coding, for America still held the secret of non-interceptible radio.

Scarcely an hour later came back the news that America had triumphed in Alaska.

Later in the night came the flash that the Khan was dead—his body had been

positively identified. America broadcast this news to the world.

By morning, rioting and dissension had broken out all over Asia. The Asiatic Union was disintegrating. It was the beginning of the end.

There was jubilation aboard the *Dallas*, but Dick Lister could not share in it. True, yes, he had saved America. He was a great national hero. The president in person had radioed his thanks.

So Dick Lister pretended to be elated, to join in the celebration—for, of course, he had to. But, through it all, two faces haunted him: the piquant oriental features of the girl he loved, and the grim, inexorable, duty-mad features of Captain Cass. Regardless of the fact that the war was now over and won, regardless of the part which Lister had played in winning it, Cass would never rest until he had brought death to the archspy of the late enemy.

And so, as soon as he could, Lister broke away from the jollification, and dragged his leaden feet toward the ship's hospital. There he stood with the ship's doctor, looking down on the still unconscious Sally.

"A very beautiful girl, your fiancée," said the doctor.

"Yes. We were kidnaped together

by the Khan's spies, and she was really more important than I in accomplishing our escape. This is just exhaustion—and, of course, excitement." But he knew that Captain Cass would certainly spike that story.

"Well," observed the doctor, "your coming is almost the first excitement I've had out of this war. I hope you're right about the algæ being over, for it's been ungodly dull being stuck here in all this slime. One casualty is all I've seen, and that one at a distance. A young officer tried to land his plane on the algæ a week ago, nosed over, and was lost. They never recovered his body."

"It's a difficult thing to do—find a body in that green muck," said Lister reminiscently. "Who was he?"

"He was—let's see—a Captain Jim Cass. We knew who it was, 'cause we'd been expecting him."

Captain Jim Cass! A week ago. Then Cass had never returned to America. He had died before the end of the two days of grace which he had granted Lister. And his knowledge of Sally's identity had died with him. Now no one would ever know!

With a sob of joyous relief, Dick Lister dropped to his knees beside the sleeping form of the girl he loved.

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PROBAK JUNIOR

Moon Crystals

by J. Harvey Haggard



I SHOULD NEVER have come to these bad lands in Venus, Omar. My dream was glamorous and beautiful back there on Earth, when I had only your radioed letters and my vision of the worlds among the stars.

"How was I to know what a lonely

crystal trader's life would be, out here so far from the American settlements, among those horrible little natives! It's enough to drive one mad! Mad, I tell you. And yet you've brought this wizened little Moon pixy here to die before my eyes."

The man kicked the metal door shut on the fog that reached in after his wet-slickered form and stood, holding the tiny native in his arms as though he were a child. There was a dark bruise on the man's lean cheek.

Omar Klegg slipped the transparent sheathing down from his face and said, "I'm sorry, Enid. Something's happened. You can't stay here. I've got to get you out of here."

He might have said that he hadn't asked her to come to Venus in the first place. She was beautiful, but she looked almost fragile in the faint greenish tinge of Venusian atmosphere, with the transparent rose-colored collar flared about her tiny blond head and blue-eyed little face. And Venus wasn't for fragile Earth folk, either man or woman.

The collar was of translucent vitrisheen, and the colors softened with hues of lavender along the tight waist and baggy slacks that clung loosely to her slender limbs. A single row of ruby-red native shells, curving little things that resembled tiny twisted horns, adorned the flaring neck piece.

Beyond her, the interior of the room was gloomy, with the steel ribs of the metal walls barely visible. A large round window, beaded on the outside with greenish moisture, told of humid clouds lying low over the rugged surface of Venus, blanketing away the Sun's rays.

The illumination was scant, but it caught at the girl's vitrisheen garments and gave the material a soft luminosity. Her features were delicately chiseled. Her tiny nose seemed a trifle insolent above the carmine outline of her impetuous mouth. Sometimes she reminded him of a fragile flower, blooming in a sheltered place.

"I'm glad the space cruiser is coming," she said with evident relief, twisting a silver bracelet on her wrist round and round. "You might have been considerate enough of me to have kept the

sick little troll out of here where there's danger of alien infection."

Omar Klegg avoided her eyes. It was odd, thinking of this woman as his wife. The past three months had witnessed a strange drama in this isolated, wind-swept Venusian bad-land territory.

"No space cruiser is coming," he stated gruffly. "You know there's none due. I said we've got to get out."

HER EYES WIDENED, fastened to the marks of conflict evident on his face. Long red scratches showed there, and the transparent face sheathing was torn raggedly. "But the Venu-Americo Settlement colony is a hundred miles away, and it's the nearest."

"We've got to go," returned Omar bluntly. He pushed her aside, moving toward an inner metallic door, giving into a bedroom apartment. As he passed, the girl's eyes narrowed with horror as they fastened upon the tiny lolling head of the Venusian native of the Eola territory, as the bad lands had been named—in honor of the terrific wind that had carved an eroded, twisted surface from the soft stone of the altitude regions.

The greenish waxlike flesh of the small head was diseased in spots that were almost transparent. Slender, pointed ears curled round close to the bulging, pink-glazed eyes. That which made the face more repulsive to her was the absence of a nose, while the froglike mouth was pendulously under-shot.

The native, no larger than a boy of twelve, lay in Omar's arms like a limp sack, with dull, unseeing eyes staring fixedly. Enid drew back, trembling.

"It's Oolanth," he said shortly, and strode into the gloomy interior. "He's dying. And with Oolanth dead the prospects of our security aren't worth a settlement coin slug. You know how I came to be tolerated here among these

barbaric little Eolians. With Oolanth gone, there's nothing to hold them back."

He deposited the native on a couch and turned. In a wall compartment he found a tiny Venus lantern with a wire handle. From his pocket he withdrew two small crystals, each the size of a pea. They might have been crystals of galena, judging from appearance, but when the vapor of the sealed glass tube struck the crystals they became splinters of cold, brilliant light, flinging a glow about the entire room.

The ribbed beryllium walls were exposed nakedly, with an oval window at the rear hung with curtains of silver cloth. Those curtains were Enid's contribution to the homeliness of an interior that presented an aspect of cheerlessness and austerity, characterized by the forbidding frigidity of unadorned metal walls and metal furnishings.

With the terrestrial value on Venus moon crystals so high, he had rarely used them during the ten daylight hours. These luxobe crystals were like radio-active minerals in a way, being continually dissipated through a radiated flow of energy, except that their rate of demolition, as compared with radium, was very rapid.

In a vapor of monoxide, these crystals radiated away as rays of sheer light. For a period varying from three months to a year of terrestrial Earth hours, these amazing little crystals would dwindle away as light, and then they would be gone.

It was for these moon crystals that Omar Klegg had come to the cloud planet. These fragmentary minerals, inactive in the ordinary atmosphere of Venus, were scattered over the surface of the planet, and it was suspected that these many particles once composed a satellite, circling the mother planet. Hence they had been called moon crystals, since the breaking up of such an

astral body could explain their haphazard scattering about the surface of Venus.

OMAR KLEGG'S life had been a solitary one these past few years, with the exception of those recent strange months since Enid had come, uninvited and unheralded, to share his primitive life on a wilderness world.

He had thought of her as a goal, toward which his laboring years were being expended. He had loved her, and had expected her, after his term of service with the Earth Trading Co. was through. Then, when he had returned to the terrestrial globe, with the profits that would be his due, she would have been a further prize.

He had been shocked when she dropped from the swinging gangplank of the space cruiser that came at six-month intervals to his trading station, bringing supplies and taking on the cargo of moon crystals which were bartered from the natives.

Enid was so delicate, so beautiful. She was out of place here in the savage bad lands. She had seemed so childishly happy with this new world. There was nothing else to do. The space commander of the cruiser had married them, and she had come to live in the trading station on Venus. Then had begun a period of disillusionment.

Yet, through his exacting labors and privations, Omar had managed to find comfort and romance in the thought that here was the source of cold light for the multitudinous crystal lamps of Earth, which had become so popular of recent years. He thought of it as he traded cheap trinkets and gaudy ornaments to the barbaric Eolians for the crystals they found. Sometimes he tried to imagine all the crystal lanterns in the terrestrial cities, lighting up the night periods.

Now he watched the twin crystals roll from his hand, through a funnel-

shaped, air-lock contrivance, and thence into the interior of the spherical glass tube of the lantern, to turn whitely luminous in the inclosed vapor. Light for the lamps of Earth! It had sounded heroic in those first letters he had written to Enid when she had been back on Earth. It didn't sound heroic now. He hung the lantern on a hook in the low ceiling and took off his slicker.

Enid stood in the doorway, staring at the thing on the couch. Her breath was bated, and she seemed bewildered with a growing fear.

"Why did you bring him here, Omar?" she protested.

"He's dying," said Omar Klegg shortly. She came across the room and caught his arm, gripping it hard. His face turned and their eyes met. He read horror dawning in her eyes, deep down, like unseen things stirring in the bottom of a pool. Her other hand had caught a loose fold of her waist and was holding it tremulously across her smooth throat.

"What will the others do?" she wanted to know.

"The trader's cruiser will be here in three months," he said, moving so his face was in the shadow from the crystal lantern, "but you must not remain."

"Will they know? Oh, they are barbaric. They remind me so of demons, and when they look at me my flesh crawls. They seem inhuman!"

"They are inhuman, Enid. You should understand that. Their composition is utterly different. Everything's different here on Venus, because there's no carbon dioxide. Terrestrial life wouldn't have developed here. It's dependent on herbivorous life, and there's no plant life on Venus.

"Somehow these natives are both animal and plant, without the aid of carbon dioxide, but just how, I don't know. They are all cold and heartless. They are inhuman, all except Oolanth, and I saved his life once. He's got a

spark of something in him. He thought I was a god, and he's never forgotten that. He fears and respects me as such—so do the other natives. But when he dies, which won't be long, they will know."

"They'll know you're just a man," said the woman, her fingers working at his sleeve.

"THAT'S why I brought him here. It will give us a start. It may be hours before they discover he's dead, and we'll be gone. They let me bring him here because they think I'm something of a god, but even at that I had to fight some of them back. That's why they've tolerated me, when no other man ever could step a safe foot on bad-land soil of Venus.

"I saved Oolanth once from a simple fever. Then again, I showed them how to cap the fumaroles, when the gas vapor began to escape in their god caves. They associate things like that with the supernatural. Now Oolanth is sick again, and they think I can save him. I can't! He's too far gone. And no matter if Oolanth looks like a demon from hell, he has befriended me, Enid. I'm going to stay with him till he goes."

"I should never have come here. I was a romantic little fool. You're not what I thought you would be.—We're—we're just like strangers, Omar. Back on Earth, you were wonderful to me. I thought we would get along splendidly."

Omar Klegg shrugged and snapped the metal-mesh sleeves tight along his wrists. The fog had dulled the silvery hue of the metal mesh; he wore plain fiber-woven trousers tucked in celluline boots that looked like red leather.

"We knew each other but two weeks, Enid. That was my first vacation, back on Earth."

She clapped her hands and leaned against the striated beryllium wall. "I thought I could never be happy unless

I were with you. And things are so different here on this tiny satellite. We're alone here. All we see are our own faces—and those of the natives. Good Heaven, Omar; can't you understand?"

Omar Klegg's face was turning red. He was becoming angry. The mouth of the native was drooling saliva, and the ugly features were writhing with inner pain.

"All right, Enid," he said shortly. "I understand one thing. Venus is not for the fragile. I'll do my best to get you to the settlements, and I'll see you catch the first interplanetary vessel home. You may go then, if you wish. But now, please leave me alone. And don't lean so close to Oolanth. The carbon dioxide in your breath is poison to him."

She drew back. The cold rays of the crystal lantern caught ruddy tints in her soft blond curls. Her blue eyes sparkled hotly, yet there was an expression almost of pleading in them. He felt her hand closing over his elbow. She had said he did not understand her. It had never occurred to him that she was right.

Omar did not turn, but he felt her clutch relaxing. When he looked around she was gone and the door was shut. Oolanth was very weak. His slender arms moved jerkily, and the loose folds of skin that stretched between the bony limbs dragged convulsively about.

The unsightly little native would not have weighed more than twenty pounds. When those powerful hind legs thrust at the surface ground, and the folds of loose skin were flattened and taut, these natives could launch themselves into the air like gliders. Sometimes they reminded him of flying squirrels of the terrestrial globe. It made him homesick for the comparative security of Earth.

He wasn't thinking much of danger.

Oolanth had been a real friend, despite his demoniac appearance. He had saved the little green man's life, and from that time on, Omar Klegg had been the one white man who could step foot on the bad-land soil of Venus without the aid of blazing needle-beam gats.

It hadn't been easy for Oolanth to prove his friendship. The natives hated the strange white men, from whose breath came the poisonous fumes of carbon dioxide.

Omar Klegg was the only white man who had ever witnessed the mysteries of the god caves, and that was only because Oolanth considered him as a sort of godlike being. If there were any mutterings in the savage horde at exposing their religious secrets to the white conjurer, Oolanth quelled them. Omar was a god to him, who had swept aside the forces of the universe and spared his life. He would do so again.

Early that day he had sent the green Venus pixies for Omar. Oolanth lay dying in the god caves, and all the savage deities called from the clouds and the wind could not halt the lowering ebb of life. And Omar had brought him here.

Oolanth was very rigid. The saliva had dried on his mouth and it hung open. The reddish eyes had set. He was dead. Omar arose, pulled the curtains across the oval window, and took the crystal lantern from its hook.

HE SHUT THE DOOR carefully and locked it. Turning around, his eyes sought for Enid, but the room was empty, except for the metallic couches and chairs with vitrisheen cushions. A picture of Earth hung slackly on the wall, above a bottle containing many colored pebbles native to Venus.

The front door was ajar, showing a strip of the foggy out-of-doors. He looked for her cloak. Sometimes she went out upon the alcove, where a tiny balcony overlooked the rugged valley,

when her spirits were restless, to be near the inscrutable rush of elements.

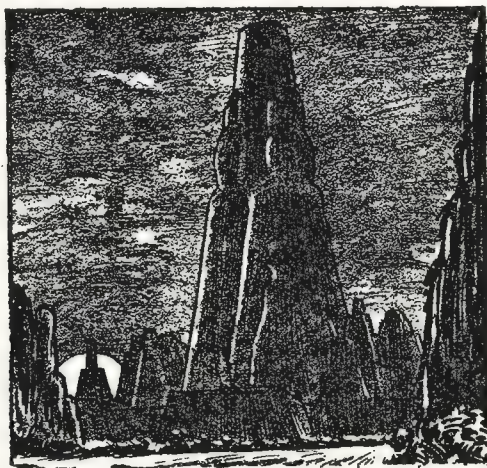
He must warn her. Placing the crystal lantern on a table, he pushed past the door into the murky twilight. In his right hand he held a needle-beam gat, drawn from a holster at his belt. There was no use to take chances.

"Enid!" he shouted. "Enid!" He was not soon to forget the look of terror upon her drawn features as she turned, leaning on the balustrade, and looked back at him. Beyond, a stretch of rocky soil was exposed to view, beneath low-lying clouds, and many diminutive figures were creeping forward, making scarcely a sound. In the claw-

troll-like green men who advanced threateningly up the pathway.

"Enid!" he shouted, and seized her arm. "Don't be a fool!" He wrenched the gun from her hand and turned her about. "Now, do what I tell you. You mustn't let them know you are afraid! Do you understand? You must be contemptuous of them. Don't show your fear. They sense that at once, and it makes them run amuck."

She lay in his arms, limp. To her it was a horrid dream. Omar had thrust his face close to her own, and she leaned against him, moveless, until he turned toward the oncoming natives, leaving her against the balustrade.



like hands were grasped knives and implements of stone. Their eyes were fixed upon the human beings who peered forth.

"It's too late, Omar," she said.

He shook his head. "How could they have known!" he ejaculated. "Sometimes I think they have instincts we can't understand."

"Then Oolanth is dead?" asked Enid, clutching at her breast. The atmosphere gave her features a greenish tinge. When he nodded, she wheeled. In her hand was a small needle-beam gun, and it was pointed toward the

He had said she must not fear them. He did not seem afraid, standing there, one arm upthrust. He shouted. There came a deep growling from many cavernous lips. Again Omar cried aloud in a peremptory challenge.

Enid saw that the natives had halted, but they were conversing among themselves with evident discontent. Occasionally a low cloud swirler drifted by, clogging the vicious little faces, but their hoarse voices were not so easily subdued.

When Omar shouted in a questioning tongue, many voices answered in

the garbled dialect of the natives. He stood talking to them for a moment, then turned to her.

"THIS is worse than I thought. They know he's dead, all right. But I think I can get us through safely, if you do as I tell you. Don't act afraid of them. Stick your chin up, and don't even look at them. I'll do the watching out for trouble.

"They want us to go to the god caves. It's too late to go for the settlements now. They'd know we were afraid, and be on our heels. But I've got an ace in the hole they're not counting on. You must do as I say."

She was deathly afraid. The green little dwarfs had always sickened her. But she nodded, and Omar turned to the door.

"Stay there," he commanded. "Look disdainful—and don't move. I'll be back in just a second."

He was gone before she could stop him, and her heart was pounding violently, while her breath came with agonizing slowness. It took every bit of her will power to stand there. She gazed up at the overcast skies to keep from fainting at the sickness that gnawed at her. Omar knew she was afraid. Yet he had demanded that she stay there. It was cruel of him, yet she was determined not to falter. Then he was back, carrying two slicker garments, with transparent face sheathings.

She realized, of a sudden, that her face was wet with moisture, that her clothing was damp. It was hard to keep from falling. Her muscles seemed not to respond naturally, but she averted her face and struggled into the garment, drawing the transparent sheathing up and around her face.

Then Omar was descending the steps, and she found herself walking behind like an automaton. Those ferocious little faces stood out in the fog like spec-

ters in a dream, and then a way was opened for them.

Omar said nothing, but strode close to Enid's side, and a little ahead. The mad vista was branded indelibly upon her consciousness. The fog dipped and eddied. She could sense the closely packed bodies of the Eolanians, standing to either side, with barbaric weapons clenched in their small hands.

The fog had choked the outlines of the metal building now, and the natives walked along beside the two terrestrials, growling to themselves. Abruptly, a commotion in the rear caused some of the foremost to look back. Enid turned and stared for a moment. She saw a group of the natives bearing a rigid figure over their heads. In the gloom they looked like shadows. It was Oolanth, stiff and horrid in death, whom they bore aloft. She told Omar what she had seen.

"They got him then," said Omar. "It's just as well."

The valley floor widened, and abruptly they were in the Eolianian village, with the globular structures of mud and rock plastered against precipitous obstructions like wasp nests. Smaller natives joined the procession, bearing curiously shaped rocks of all colors. Enid presumed these smaller green people to be women and children.

She saw a creature about the size of a dog, looking something like a wasp without wings. It was the only domestic animal known to the green men, and like them, it was of alien constitution, independent of herbivorous plants. When it started toward them, Omar kicked at it, and it fled with a slobbering sound.

A MANIACAL FRENZY seemed born within the natives. Their feet stamped the rocky floor of the canyon in a wild cadence. Their pinkish eyes protruded, and the great bloated lips opened widely to emit chortling screams.

The procession had halted before a high cliff of black rock, from which yawned a steep triangular opening.

"It's the entrance to the god caves," said Omar. "Don't be frightened by the clamor. They're propitiating their gods."

"They are motioning for us to stop."

"Keep going," he demanded curtly. "We're not going to recognize their deities." Beyond the three-cornered opening, a faint luminosity was revealed. As they went on into the cave, a vague and ominous growling rippled over the grouped natives. Some of them leaped and cavorted, making demoniac and obscene gestures. When the funeral cortège for Oolanth passed solemnly after the terrestrials, those behind made a mad rush for other cave entrances that would converge on the god caves.

"How are you feeling, Enid?"

"I—I want to cry."

"Hold together. It may be worse than this. When we get to the god caves, give particular notice to the domed structures on the cavern floor. I told you that I showed Oolanth how to cap the fumaroles in the floor of the god caves. That is what those structures will be."

The rugged walls of the cavern glowed phosphorescently, lighting the limited confines. Behind, the trampling of many feet appraised them of Oolanth's funeral procession, close upon their heels. The corridor was worn bare by the passage of many feet. It turned twice, then gave into a large circular cavern, with a massive altar of red, glassy rock at the farther side, above which was a monstrous idol, carved into the phosphorescent rock.

The head of the idol was huge and distorted. It looked something like a monstrous squatted toad. Branching from the central cavern were many openings and runways, from which the natives streamed, gesticulating and shouting.

Omar pointed to the low heaps of domed stone, scarcely a foot high, plastered over with thick cement. Enid stumbled over one of them. The rumbling of many hoarse voices filled the cavern.

All around them were grimacing faces. The little green men shouted and spat at the terrestrials, brandishing their weapons. Only the way before them was left open, and that led up to the altar composed of a substance like red glass.

But they were carried past this also by the surge of natives behind them. A second doorway yawned in the cliff beyond the idol. They were pressed into the opening. Omar frowned. He had never been in this inner cavern. Enid was sobbing, despite her efforts to quiet her emotions, and she clung unashamedly to his arm. A glitter of silvery metal in one wall captured his attention.

HE STARED, although he had no time to stop and examine the formation. It was almost solid with luxobe, the moon crystals of Venus. A massive meteorite of the substance must have been imbedded here. Perhaps it was the core of the satellite that had crumbled and fallen from its orbit. So it was here that the natives got their moon crystals. He had supposed that they found them on the rocky surface of the bad lands somewhere.

Abruptly Omar knew that the Eolani-ans never intended that they return to tell of this large deposit of moon crystals. He gripped at the needle-beam gat hanging in its holster. The shouts of the green men reverberated deafeningly. Now a second and even larger cavern loomed ahead.

They strode down into the bowl-shaped cavity side by side, followed by the thronged green natives of Venus. Omar could have shouted aloud for joy. He took a quick look around be-

fore the natives crowded in. The fumeroles had evidently broken loose in this cavern also, for he saw signs of native work, capping the gaseous outlets with concrete domes. He looked farther along the walls.

Hung around against the walls were many whitened skeletons, one of which was large and unlike the others. So one other Earth man had got here. But he had died. It was a chamber of the dead.

Oolanth's body was placed, face up, in the center. A group of natives formed a ring and danced about him, making superstitious gestures and bellowing in strident tones. Then all of them knelt, and one arose over him, and lifted his head high to scream a hideous challenge.

Oolanth's soul had gone to the great darkness.

Enid could scarcely believe her senses. Omar had arisen to face the little green man, and he too lifted his face and suddenly screamed aloud in an answering challenge that rung to the phosphorescent roof and rebounded again with eerie echoings. Omar Klegg knew that the affront made by the little green man had been aimed at the terrestrials. The native had proclaimed that the Earth beings were not gods, and Omar had hurled the defiant words back into the other's face as a lie.

A hemispherical sea of faces hemmed them in. The green man came forward threateningly, preparing to throw a sharp stone fragment, equipped with filed spikes. Omar leveled the needle-beam gat. When the Eolianian sprang, a blue beam of intense light cut his body in half. Omar turned as his adversary sank to the floor, and again screamed a warning in the native tongue.

His face was almost bestial. Enid cringed. It was hard to believe that Omar was a terrestrial, and her man. She looked about into the ring of green-

ish faces, and knew suddenly that these creatures were as a pack of hungry wolves, without mercy. Another green man leaped over the body of Oolanth, and again the needle beam spat its ray of death.

Simultaneously the entire horde began edging in.

"Be ready to run for it!" shouted Omar.

THEN he turned and shot the bluish needle beam down along the cavern floor. The slender ray bored into a dome shape plastered into the rock floor. For a moment it ate into the stonework. Then something erupted. A shrill whistle of escaping vapor followed a spray of rock upward. Before the astonished natives could attack, a mouth from the deep interior of Venus spat up, and the expanding gas created a column of ice that reared up like a cold flame.

"Back!" cried Omar, grasping Enid by the arm. "It's carbon dioxide—pure carbon dioxide. And it's been under a pressure."

Enid seemed paralyzed. She had seen ice formed by the release of carbon dioxide under pressure in liquid oxygen experiments. Heat was absorbed from the air, and the pure oxygen became a cold liquid. She saw it, an icy, silvery stream, trickling away from the mounting column of ice to run across the face of the dead Oolanth.

The blue disintegrator beam traveled farther along the cavern floor, cutting crazy furrows to other mouths of cement, which shrieked with escaping gases and spouted up other tongues of frigid ice. The natives were bent over, writhing and screaming. The carbon dioxide was a poison that acted rapidly for them. Their muscles became twisted and hardened, and they fell back before the hissing gases as wheat falls before the cutter.

The terrestrial lungs were accustomed

to carbon dioxide, but not to the frosting air. Enid scarcely remembered the mad dash back along the cavern way. They encountered no resistance, leaving behind them columns of dry ice, reaching up toward the ceiling, and a shambles——

Even those green men yet loitering outside were so terrified that they flung themselves upon their faces as the terrestrials passed.

"We'll have no more trouble from them," said Omar, as they stumbled through the doorway into the familiar quarters of the trading company building. "I've seen fumaroles on Earth that vented pure carbon dioxide, but I don't know what chemical change started these gaseous outlets in Venus, where the gas has heretofore been unknown. It was lucky I showed the natives how to cap them off. Now we can make that hundred-mile trek in perfect safety to the Venu-Americo Settlement."

Enid said nothing. She lay for an hour upon a couch, regaining her strength and calming her nerves. When she awoke, Omar was sitting in a chair, smoking a cigarette, with his eyes in the distance. A crystal lantern hung over him, and from time to time his eyes roamed to the tiny crystals in the glass tube, radiant with unwavering light.

SHE lay for a long time, watching him through narrowed eyelids. Then she yawned, stretched her sore limbs, and arose. Her ankles and knees twinged excruciatingly.

"You awake, Enid?" he asked. "I guess it's been like a bad dream. You'll be glad to know we can start for the settlements in the morning."

She walked unsteadily toward him. "This means a lot to you, doesn't it?" she asked wonderingly. "I mean this planet, this life, trading to the natives. I suppose they might establish a mining colony here, with you to direct the men in removing the meteor."

Omar avoided her eyes.

"I don't know," he said. "Maybe. I haven't decided yet. I'll decide that after you're gone."

"But I'm not going."

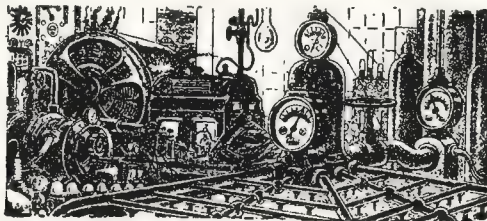
"Enid!"

"No, I'm not."

Her eyes were moist. "I couldn't understand how much it meant to you," she said. "But when we were in the caves, I knew it was you that I cared for, and I understood a part of how you must feel. Oh, Omar, don't you want me? Do you think—I'm too—fragile?"

She was as light as a feather in his arms. He kissed her over and over again. "Fragile," he said. "You're not fragile. I was talking about inner strength when I said Venus was not for the fragile. I had you wrong, Enid. I knew that, back there in the caves."

She began to cry, and he sat back with her in his lap to stare at the crystal lantern with its unwinking minerals glowing softly in the glassen tube cradle. Light for the lamps of Earth. At last he had found some one who could share his dream.



The Isotope Men

*A story of science which runs
away with the world—for a time*

by Nat Schachner

THE long, bleak room was hushed with strain. The gray morning light filtered wanly through the high, barred windows and tinged with vague unreality the strange apparatus that crowded the floor.

Kenneth Craig shivered a bit as he stared through the grimy glass at the huge, somber walls that inclosed the prison in unbreakable embrace. He was hardly conscious that his eyes carefully avoided the complication of equipment that he had helped to devise and construct; he knew, however, that he dared not meet the gaze of the three men who shared with him the immensity of the dingy interior. Surely the emotion that suffocated him and caused his heart to pound with great hammer blows was visible on his countenance for all to see.

Somewhere a bell boomed faintly, beating out the hour with sullen strokes. Craig ticked them off shudderingly. One—two—three—four—five—six! A silence fell upon the men in the room. Some one cleared his throat nervously. A sound arose, faint, far-off at first, then swelling into a muffled clamor of many voices, howling, shrieking in sub-human accents of despair and bitterness.

Kenneth Craig knew what it was without being told: The vast susurrous that exhaled from hundreds of gray-faced convicts, each immured in his own cubicle of steel, when one of their own commenced the slow death march to the execution chamber.

Execution chamber! Ken stiffened, shuddered again. A wave of revulsion swept over him. It was a monstrous thing they were about to attempt; it was worse. A man had a right to die in peace, even if he were what this man was claimed to be. He had a right not to be subjected to an experiment that would burst the bonds which nature had immutably decreed, and produce—what?

For the moment Ken was no longer the eager, brilliant scientist who had worked under and with Malcolm Stubbs, world-famous physical chemist and biologist. He was just a very human young man who shrank from the moral consequences of the next few hours. Animals, yes! The results had been dazzlingly successful; that was why the governor had granted this particular, unprecedented thing. But a human being! Who knew what the incalculable consequences might be; who knew—

Stubbs was an imposing figure, tall, angular, face carved into bleak, uncompromising lines. A harsh taskmaster who drove himself as mercilessly as he drove others; a man whose fanatical devotion to science had withered every human emotion, every human attribute. The past year had not been exactly a bed of roses, Ken thought wryly, though there were hundreds of others who would gladly have given their right arms to step into his place.

Stubbs stood close to the huge quartzite tank that ran like an oblong, transparent coffin down the middle of



For one long minute Stubbs, the recessive, stared with hate-filled, triumphant gaze into the paralyzed eyes of Stubbs, the dominant.

the room. Coffin? Ken grinned wanly to himself. Even his smiles were getting macabre.

The prison warden shuffled his feet with a scraping sound. It was he who had coughed nervously. He was a thickset man of middle age, and he had been in charge of the State penitentiary for almost a decade. He had supervised and been present at a hundred executions during that period.

Surely, Ken thought, he should be immune to any qualms over what was about to take place. But he was obviously not. His fingers clutched convulsively at the keys that dangled from his belt, and his free hand mopped continually with a large, damp handkerchief at his baldish head. His eyes jerked like marionettes on a string from the forty-foot tank with the profusion of apparatus in back of it to the narrow, gray door.

The fourth man was the most placid of them all. He leaned easily against the wall, chewing with calm deliberation on an unlighted cigar. He was the prison doctor, short and somewhat dumpy, with pink, smooth cheeks and a correct, impersonal manner.

The muted howling from outside died away as suddenly as it had arisen. As if the inmates knew that it was all over, that the thing was done, irrevocably. Ken felt the palms of his hands go dry and hot. If only they were right; if only it *were* over! But they were mistaken. The electrocution chamber was only a few steps from "Condemned Row"; the current should already have surged through the body of the man whose life had been declared forfeit by the State. This place which they had transformed into a laboratory was at the farther end of the prison yard, and it took time for the slow, measured march.

No one but the four of them, waiting in hushed rigidity, and the governor, knew what was about to be done. Not

the prison guards; not the inmates; not a single, solitary person in the outside world; not the condemned criminal himself.

"If this should leak out," the governor had remarked grimly when he signed the necessary documents in authorization, "it would be as much as my political head is worth."

He had been mighty reluctant, the governor had, and only the ruthless pressure Stubbs had brought to bear, and a certain awe which he had for science in the abstract had turned the trick.

For over a month Stubbs and his young assistant had worked in feverish secrecy, at dead of night, setting up their equipment in this abandoned workshop. The governor had insisted that the experiment take place within the prison walls, where, if necessary, the results could be quietly hushed up. An order had been issued the night before, routine, officially terse, barring reporters and spectators from the impending execution of James Harty, bank robber and murderer extraordinary.

THE DOOR swung open. Ken whirled. His nerves were jangled. Warden Parker dropped his heavy keys with a crash. His hand trembled as he stooped to pick them up. Even Dr. Bascom stiffened from his slouch. But Stubbs, to whom this meant the consummation of years of insane, driving toil, did not move.

Two men in the blue of prison guards came into the room. Between them, manacled to their wrists, was a third. His face was as gray as the loose, ill-fitting costume he wore; his brutish, deep-set eyes disclosed the terror that seeped from within. Yet his head was flung back; a sneer of attempted bravado writhed at his lips. He owed it to the curious spectators, to the reporters, to his fellows out there in the world of sky and city streets and smoke-thick

hide-aways, to put up a good show. "Jim Horty, dead game to the last!" The words danced before him and braced limbs that unaccountably wanted to sag beneath him.

His pig eyes darted around the room. The hot spot! Where was it? He'd spit contemptuously in its direction. That would be a new gag, would rate columns in the papers. All through the long, dreary hours in Condemned Row he had thought of that last, supreme gesture.

The steel links clashed indistinctly on his wrists. There was a dull roaring in his ears. Where was he? This was not the execution chamber. That big tank, filled with stuff that looked like jelly, all that funny-looking machinery around the room—what did it all mean?

For a moment a wild hope surged through his heavy, apeline frame. Any change from the sinister routine meant only one thing: The governor had reprieved him. He would live—*live!*

Sure! There was the warden, the louse, and the doctor. Old "Crab-face" didn't look any too good—like he was scared of something. Of what? Horty looked wildly around again even as the door shut behind him with irrevocable clamor, and steel locks tumbled into place.

He began to sweat. It was a crummy sort of place. The execution room he could stand—he had hopped himself up for that. But all this—it gave a guy the shivers. Crab-face scared, "Doc," looking through him as though he wasn't there. And those other two fellows. Never saw them before. One bird, just a youngster, looked white around the gills, and there was pity in his eyes. Pity! For Jim Horty! There wasn't any reprieve then. But what—

His limbs trembled under him. He would have fallen if the guards had not held him up.

"What you gonna do with me, warden?" he croaked hoarsely.

Warden Parker shook his head. He did not like this himself. It was out of his line. Horty was entitled to a nice, clean shot of juice, just like the others. A couple of minutes, and it would be over, everything regular, and the normal routine of the prison would flow on. But this! Well, orders were orders!

"Sorry, Horty," he said almost kindly, "you're not in my hands any more. Mr. Stubbs has complete charge here."

Stubbs nodded. To Horty, his tall, angular frame seemed to grow and distort, and his eyes glittered with strange lights. "That's right, Horty. And you ought to be mighty thankful, too. You are about to become the subject of an experiment that will change the course of the human race, produce results incalculable in their consequence. Instead of dying ignominiously in the electric chair, to you has been granted the supreme honor of becoming the first of the new men!"

What was the old geezer talking about? Experiment! First of the new men! No electric chair! The warden looked more scared than before, and that young fellow—

A blinding light seared through Horty's brain, brought understanding. They were going to cut him up, see how his insides worked, like they did in hospitals to dogs and rabbits. Vivisection! That's what they wanted to do to him. He threw himself suddenly forward against his manacles, so suddenly that he almost dragged the guards off their feet.

"I ain't gonna let him cut me up," he screamed. "I got rights! The judge told me I'd get the electric chair. I'm entitled to it; nobody can take it away from me. Warden Parker, don't let him cut me up."

He was pleading now, sobbing, all

his bravado forgotten, pleading for death, for anything but that tank and that machinery and that old fellow they called Stubbs with the eyes that burned right through him.

"It's the governor's orders," Parker answered helplessly.

The scientist took a step forward. "You fool!" he exploded. "I'm giving you a chance at a new life, at a life far beyond your stupid comprehension."

"I don't want it," the criminal screamed. "I want to die, like they told me. Get me my mouthpiece; he'll help——"

"All right, men." Stubbs nodded coldly to the guards. There was no use in arguing further with the idiot. The experiment must go on according to schedule.

They handled the shrieking, struggling criminal expertly, impersonally. It was all in the day's work. They unlocked the handcuffs, threw him down on a pallet, stripped him of every shred of clothing. Then, oblivious to his shrieks and obscene cursing, they held him tight while Stubbs injected a hypodermic into his arm.

The shrieks grew fainter, thicker; then they died away in a long shudder. James Horthy lay stiff, unmoving, unknowing.

II.

KEN CRAIG was already at the huge quartzite tank. Now that the crucial experiment was already under way, he became once more the scientist. Human emotions dropped from him like a cloak. Every step of the procedure had been rehearsed a dozen times; had been practiced with animals on a smaller scale time and again. Most of the technique, as a matter of fact, was his. Stubbs was not good at that.

The great tank was forty feet long, ten feet wide, and five deep. It was

filled almost to the top with a clear, lusterless jelly. Huge electrodes sank deep into the thin, quivering stuff at either end, and were connected by cables with an instrument board on the wall.

Ken pressed a button. A section of the glass top slid smoothly underneath, leaving the tank exposed just wide enough to admit a human body. Above it, suspended from a miniature crane, was a cradle of extremely thin, longitudinally stretched wires. At a gesture from Ken, the guards lifted the immobile body of the condemned man, deposited it carefully into the cradle.

Then he knifed a switch. There was a whirl, and the cradle, with its strange burden, dipped slowly from unwinding chains into the transparent substance within the tank. Down, down, ever down, while the men in the room stared with fixed, unwilling fascination. Dr. Bascom forgot his pose of smooth boredom, leaned eagerly forward. The guards gaped blankly.

Ken was tremendously cool now; all his faculties concentrated on the work in hand. The jelly closed with a quiver over the descending form. Within its clear depths the cradled body showed like a prehistoric monster caught in a huge globule of ancient amber.

There was a tiny bump. The cradle had come to rest on the floor of the tank, close to the positive electrode. Ken pressed another button. The wires opened out underneath the rigid body, and the apparatus rose to its former position again. The glass section slid smoothly into place. The tiny click, as it closed, was loud.

The warden shivered, looked around. Professional routine jerked him out of his haze. It would never do for the guards to witness what was going on. They might talk.

"O. K., you two," he said harshly. "Get back to your duties." The men muttered something, went out hur-

riedly as if they were glad to be done. Even the tainted air of the prison corridors outside seemed sweet after what little they had seen in the converted workshop.

Stubbs moved quickly to the instrument panel. For an instant his long, bony fingers clung with fierce grip to the bakelite handle of the master switch. His eyes burned through the transparency of the tank, fixed with a fanatical light on the quiescent body within.

The future of the world rested on the tug of his hand. If the experiment proved a success, his name would go rocketing down the centuries. Darwin, Newton, Einstein, Galileo would be pale, glimmering phantoms compared to him. Yet he hesitated. Things his young assistant, Ken Craig, had said, flashed through his mind. The youngster had pleaded with him not to go through with this final test. Had been damned persistent about it.

He, Malcolm Stubbs, had finally forbidden further discussion. The young whippersnapper, with his silly talk of outraged nature, of incalculable results. What of them? Science was its own justification. Nothing else mattered. Suppose what Craig had said were true? For an infinitesimal second a vague doubt disturbed his fanatic unity of purpose—then he was himself again. The switch knifed down.

A TREMENDOUS current surged through the electrodes. The jelly, at their base, stirred uneasily, blurred slightly with tiny bubbles. The seemingly dead figure of Horthy hazed at the edges.

The great experiment had begun! The experiment that would change the face of the world, that would bring to pass disruptions and transformations beyond anything even Ken, in his vaguest and most inchoate fears, had ever dreamed possible. Could the four men in that laboratory have peered into

the future—— But that was impossible, inconceivable. And wiser perhaps. If the human race could visualize perfectly the consequences of its acts, nothing would ever be done, ever accomplished. Mankind would die of dry rot and cowardly inanition.

Ken looked at his wrist watch. "Six ten," he reported. "At seven fourteen the reaction should be complete."

A choking gasp came from the warden. Terror leaped into his eyes as he pointed with trembling finger toward the innermost recesses of the tank. "My Lord, look!" he almost screamed. "Look at Horthy!"

Ken had never taken his eyes away. The prison doctor's face was a mask of wonderment. Stubbs permitted himself a bleak, frozen smile. The experiment was proceeding according to schedule.

The body of the immersed criminal seemed to have widened out. Not bloated, in the way a dead thing swells when putrefaction sets in, but stretching in a flat, horizontal plane along the jellied floor of the tank.

The features were still there; the outlines of his nude form were still recognizable, but they were curiously vague, curiously misty, as they groped away from the positive electrode, seemingly urged by some irresistible force in the direction of the negative cylinder.

Ken was suddenly weak inside. He could understand exactly how the warden felt. He had seen this happen many times with small animals, but a human being, even a murderer, was somehow different.

Stubbs' eyes snapped angrily. He did not like any display of human emotion during the course of an experiment. It complicated things unnecessarily and introduced an incalculable element which found no place in his scientific equations. The emotions altogether were signs of weakness, of addle-pated thinking.

"There is no need for expletives or dramatics, Mr. Warden," he observed with glacial frigidity. "I must insist upon a proper decorum from the spectators."

But Parker was beyond hearing the intended rebuke. His eyes were bulging on the tank. The jelly was quivering with strange forces. Invisible strains emanated from the positive electrode, heaved the transparent substance in long, internally contained billows down the length of the tank. The process was accelerating.

Jim Horty was no longer a solid, compact body. He had lost shape and substance. He was stretching out along the plane of vibration in a tenuous, ghostlike flow; he was blurred and misty and unrecognizable; he was a parallelepiped of former length and thickness, but already he was three feet wide and expanding visibly. Then, as Parker uttered a choked cry, something happened.

The misty, tenuous form seemed to divide along the longitudinal axis of his body, something like a cell reproducing by binary fission. To the extreme right and left, dense, formless masses made dark blotches within the jelly; in between, shading into the two heavier sections, was a thinner, more rarefied substance, through whose interstices the vague, adumbrating outlines of the tank behind were dimly visible.

Parker's face was gray and twitching. Stark horror swept over him in a blanketing cloud. He could stand it no longer, this thing that he was witnessing. With a shrill cry he wheeled, ran blindly toward the steel door, fumbled with palsied fingers at the bolts, and was out. For the first time in his life the warden had known fear; for the first time in his life he had violated the simple terms of his duty. He had quitted the side of a condemned criminal, had abandoned him to the hands of men not connected with the prison.

It was not until he reached the privacy of his own office, and dropped trembling into a chair that he thought of that. But Horty was no longer alive, he argued with himself. It was inconceivable, ghastly, what he had just seen. Not for a million dollars would he venture back into that place of horror. Let those inhuman scientists do what they wished, as long as he did not see.

BACK in the converted laboratory, Stubbs was faintly amused. A sardonic smile twisted his thin lips. "We're better off without him," he remarked to Dr. Bascom. "You don't feel the same way about an epochal experiment in science, do you?"

The prison doctor hastily stuffed into his pocket the large handkerchief with which he had been mopping his too-pink face.

"No, no, of course not," he replied hastily. "I wouldn't miss this for worlds." Yet Ken was sure that only professional pride kept him from following in the footsteps of the warden.

Ken forced his eyes away from the tank. Everything was proceeding according to schedule. There was nothing else to be done now but wait. And it was not a pleasant sight to watch. Silence, however, would be insupportable.

"I think Dr. Bascom would be interested in knowing exactly what we are doing," he told Stubbs.

The doctor glanced toward the tank, looked hurriedly away again. Perhaps, if he could focus his mind on cold, scientific abstractions, the queazy feeling might pass away.

"I'd be honored," he replied eagerly. "I have only the vaguest ideas as to—that!" His short, pudgy arm extended in the direction of the tank.

Stubbs frowned. What did Craig mean by his fool suggestion? He knew how he, Stubbs, hated explanations, especially to a layman. A doctor? Bah,

worse than a layman! His mind would be cluttered with a horde of outworn ideas, of old wives' superstitions masquerading in the guise of science. Nevertheless, he was an audience, and the experiment was going smoothly, and Stubbs was still human enough to be vain of his accomplishment. So he unbended slightly, and condescended to the doctor.

"A good many years ago," he began rather ungraciously, "I had a brother. When the War came, he was idiot enough to leave my laboratory, to throw himself into the trenches. When it was all over, he came back. But the War had done things to him. Your fellow medico diagnosed it as shellshock. That, no doubt, was the inducing mechanism, but the result was definitely what happens in a very inconsiderable number of cases.

"My brother was no longer himself; he was two other and distinct personalities. He remembered nothing of his past life; nothing of myself, his family, or friends. The two states were separate and sharply defined. He would alternate suddenly from one to the other, and in each State he would be wholly unaware of his other incarnation, so to speak."

Dr. Bascom nodded his head vigorously. He was interested now. This was something in his own field. "A clear case of dissociation of personality," he remarked. "Or what is sometimes called dual personality. Janet has listed any number of cases in his 'Major Symptoms of Hysteria,' and Morton Prince made a very careful, painstaking study of a single instance in his 'Dissociation of a Personality.'"

Stubbs said scornfully: "I've read them just as I've read every one else who pottered around on the subject. All they do is describe the effects, the end results, but not one of them went behind the effect to determine the cause, the reason."

"I don't think that's quite fair," Bascom objected. "There have been any number of theories. Freud, Jung and Adler claim that it is the unconscious coming to the fore, and masking the conscious personality. There are others who——"

"Bah!" Stubbs snorted. "I am a scientist, not a dreamer, a hider behind words. The unconscious! A word to becloud the issue. What, scientifically, does it mean?"

"Well——"

"Precisely," Stubbs interrupted. "Nothing at all. I delved deeper, seeking the true inner mechanism of the change. No wonder the medicos, psychologists, what not, were at a loss. The real explanation was out of their field completely. It was in mine, the field of physical chemistry. It was left for me, Malcolm Stubbs," he continued triumphantly, "to discover that mechanism."

Dr. Bascom gasped. He knew quite as well as Stubbs that the pretended explanation of dual, or multiple personalities, does not explain. If what this tall, angular scientist was saying was true, then the whole field of psychology, of neural medicine, would be changed.

"But how?" he asked.

Stubbs ignored him completely. He was just an audience, nothing more. "Did you ever hear of isotopes?" he demanded.

"Yes," the doctor admitted cautiously, "but I have only a vague idea of what they're all about."

"So do most people," the scientists retorted. "Up to quite recently it was thought that the so-called elements, like hydrogen, oxygen and lead, were really simple elements. That they could not be broken down any farther, except, of course, into electrons, protons, etc. But a good many workers were suspicious about the fractional masses of the supposedly simple elements. According to the periodic law, according to the elec-

tron theory, these masses should have been whole numbers.

"Then came startling discoveries, in which I did my share. These so-called simple elements were not simple at all. They were mixtures of two or more true elements, lying close together on the atomic scale, and so nearly identical in their physical and chemical properties as to be very difficult to separate. And each one had a whole number as its atomic weight. Thus, oxygen, in reality, consists of three isotopes, with weights of sixteen, seventeen and eighteen respectively. Carbon has two, nitrogen two, sulphur three, and hydrogen had its isotope also—deuterium."

The doctor smiled. "I've heard of that, all right," he said. "Even the newspapers give space to heavy water."

Inwardly, however, he was wondering what the devil all this had to do with the unspeakable thing that was happening in the tank. Out of the corner of his eye he caught a glimpse that made him avert his gaze quickly, and changed the smile on his face into a forced, sickly grin.

There was no evidence of the man they had called James Horthy any more. He had been swallowed up, ingested seemingly into the horrible plasma that filled the quartzite interior, that was quivering now and bubbling in a veritable witches' broth. Faintly, halfway down the tank, was an amorphous cloud. Without shape, without outline, yet Bascom had the sickening sensation that somehow, somewhere within that slowly progressing mass, the material thing that had been Horthy resided.

III.

THE DENSE PHANTOM trailed back through the jelly in a slowly thinning smoke, until only the straining eye could discern its presence. Then it thickened again, still more slowly, until, some five feet from the positive elec-

trode, it coalesced into a thinner, rarer, smaller simulacrum of the more rapidly moving mass. There was that within its formless vagueness which appalled the doctor, more even than the farther one.

"Yes, I've heard of that," he repeated dully. He must say something, anything, to rid him of that last glimpse.

"It struck me suddenly," Stubbs went on incisively, "that in the isotopic elements lay, possibly, the answer to the problem of my brother, of all similar cases of dissociation of personality; even, perhaps to the unconscious that the psychoanalysts talk about so glibly."

"I don't see how," Bascom said, plainly bewildered.

"It is really quite simple," the scientist explained patiently. "The human body, protoplasm, bone structure and all, is composed chiefly of six elements. Carbon, hydrogen, oxygen, nitrogen, sulphur, and calcium, with a scattering of others. Every one of these has been dissociated into its isotopes. They exist, as far as we know, in indissoluble mixture. But suppose that isn't so. Suppose that some internal mechanism exists in the human body, in each cell, which under certain rare conditions, clicks, and dissociates the isotopes. We already know much about the genes of inheritance within the cell nucleus. We know that there are present, side by side, genes of opposing inherited characters. The stronger, or dominant gene will mask the recessive characters, as if they did not exist. Yet, in the next generation, perhaps, the recessive gene, by proper association, may in turn mask the dominant characteristic."

Dr. Bascom was listening intently now. Ken Craig had heard this exposition before. As a matter of fact, it was he who had suggested the analogy to Stubbs, had finally put him on the right trail. Naturally it was too much for an assistant to expect credit.

"Why then, I thought," Stubbs went

on, "might not the isotopes of the elements in the human body act the same way? Those present in the largest quantity would be dominant, the others recessive. Less than one per cent are the isotopes; the other ninety-nine per cent what we had heretofore considered the entire element. Suppose, as in the case of recessive genes, something happens, and the minority isotopes suddenly mask the dominant norm. What would you have?"

The doctor's eyes bulged. "Why, I—I'd say you'd have a different personality. The other part of what we've called dual personalities."

"Exactly," Stubbs declared triumphantly.

For a while there was silence. Bascom dared not look at the tank. He was afraid. It was hard to digest what he had just heard. Then, diffidently, he ventured: "The theory sounds impeccable. But——"

"How put it into practice?" Stubbs finished for him. "Easiest thing in the world. The technique for separating isotopes is pretty well established by now. I've improved on it immensely. I've done more than merely shift isotopes within the body. I'm able to separate them entirely, make two separate human bodies, two separate entities, where one existed before, each composed of a unit set of isotopes. I've done what nature has merely fumbled at doing. I've taken the two personalities and clothed them in visible form for the first time in the history of the universe!"

BASCOM GASPED. So that was what was taking place within the tank. He shrank away from its implications, even as Ken had done a while before. But Stubbs thought his gasp was one of awe for his genius.

"In that tank," pursued the scientist, "is a nutrient gelatin, properly treated to carry an electric current. The in-

jection I gave Horthy contained, beside a powerful narcotic, a saline solution to promote conductivity within his body. I am passing a current of extremely high amperage and low voltage through the gelatin. The body dissociates into ions, and, following the laws of electrolytic separation, these ions migrate through the gelatin very slowly from the positive to the negative electrode. But the speed of migration is not the same for the various isotopes of the same element. The lighter isotope ions move faster than the heavier ones. And the lighter ones are invariably those elements which make up ninety-nine per cent of the whole.

"In other words, the heavy, dominant personality will reach the negative electrode first; the lighter, recessive personality will lag behind."

"But they'll both be mere dead aggregations of atoms," Bascom protested. "You've murdered a man."

Stubbs smiled bleakly. His lips parted, as if to speak, when Ken, standing at the controls of the tank, absorbed in the drama within, shouted excitedly. "I think we've reached peak load, chief."

Stubbs rushed to the side of the tank. Bascom followed with lagging feet, oddly reluctant. The larger, heavy cloud was clustered now close to the base of the negative electrode. Outlines were gone, all trace that once it had been a human body. A mere mist trailed backward toward the positive electrode, faded almost to nothingness. Then it thickened gradually until, some five feet away, it became a small, thin cloud of migrating ions.

"Test it with the mass spectrophotograph," Stubbs ordered, eyes glinting with strange lights. But Ken was already at the instrument. Two long tubes extended into the tank, three inches apart, and connected outside with the spectrophotograph. Their ends protruded exactly

to the point at which the cloud of ions was vaguest.

Ken opened a valve. There was a hissing sound as a tiny amount of the gelatin sucked along the two tubes into the chamber of the instrument. He then adjusted sights, watched intently. When he lifted his head, it was hard for him to keep his voice matter-of-fact, coldly scientific.

"The division is complete," he announced. "All the light ions are in the right-hand sample, the heavier ones are wholly to the left."

Stubbs raced swiftly to the master switch, opened the interlocking knife edges. The current shut off; the gelatinous substance within the tank heaved, shuddered, and came to a deathly quiescence. The two blobs of matter hung motionless in its depths.

The scientist returned to a huge, cameralike affair that faced the tank. He swung it slowly until its great lens was focused sharply on the larger blob of matter. He pressed a button. A violet glow sprang out in a cylinder of radiance to bathe the formless mass of ions and their supporting medium with its eerie light.

"The experiment is through, finished." He turned to Bascom exultantly. "We've done it before with animals; now it has been successful with human beings. You've just watched something epochal, something that may mean the beginning of a new era for the world."

"I don't understand," the doctor stammered, staring at the still formless cloud. "Horty is dead, vanished, even though you did split him up into his component isotopes."

"Not at all. This machine is my crowning triumph. I call it the 'reintegrator.' That ray you see is a complex of a thousand different wave lengths. They come from a pattern within, a pattern which corresponds exactly to the form of the human body.

As they impinge on the disorganized ions, they exercise a selective influence, and compel the various atoms to migrate to the particular wave length to which it is attuned. There will be formed with the gelatin an exact replica of what had once been James Horty. Watch!"

Bascom watched, and felt the hair bristle on his neck, all over his body. Slowly, but surely, the vague, amorphous mass was taking shape and form. As the violet light continued to glow steadily and strongly within the tank, the cloud lengthened, shifted with internal movement, showed strange, wavering outlines. The outlines hardened; the mass grew darker and more solid. Before the doctor's aghast gaze creation was taking place. Legs appeared, arms, fluid as yet, but shaping into plastic form. Then a face—a terrible, hideous thing.

IV.

SUDDENLY the whole mass shuddered as if from some strange inner compulsion, and behold! Jim Horty lay motionless, nude, eyes closed, near the negative electrode, even as he had lain, hardly an hour before, at the base of the positive electrode.

Dr. Bascom gave vent to a strangled cry, jerked forward. There was no change, no slightest difference that he could see.

"Naturally"—Stubbs answered his unspoken thought—"over ninety-nine per cent of his physical elements are present. You wouldn't expect to notice any difference. Even a scale would show him only about a pound lighter than before."

"Is—is he alive?" Bascom whispered.

"Of course. There would be no point to the experiment otherwise. As soon as I remove him from the gelatinous base, and the narcotic wears off, he'll awake as though nothing had happened." Stubbs chuckled, and to Ken there was

something inhuman about that chuckle. "Of course, he'll be a new personality. It may be a close approximation to his old one, or it may prove entirely new. It all depends on how powerful his recessive personalities were, to what extent they masked this particular dominant. Remember, he is now composed of a pure set of isotope elements."

The doctor shifted his eyes fearfully to the tiny cloud of formless ions farther up the tank. "And—that?"

"The heavier, slower isotopes," Stubbs explained. "Less than one per cent of the total body, as you see. Yet containing the same relative proportions of the elements of Horthy's body as the other. It was a much more difficult problem to bring *that* personality to life, but I solved it. The reintegrator will form the pattern of the body, just as in the other case. But it will be a mere ghost, a tenuous thing. Naturally, for one per cent of matter will be spread over a volume of space that normally holds one hundred per cent.

"But I will feed the necessary additional elements into the tank, and, under the influence of the pulsing waves, they will penetrate the area and arrange themselves selectively in their proper places. Food for the growing body, you might consider it. Within a few hours another James Horthy will lie side by side with the one now visible."

Stubbs was already moving toward the reintegrator. But Ken Craig was there ahead of him. His face was white with strain, but his voice was steady.

"I've gone along with you this far, Mr. Stubbs," he said, "even though it was against my better judgment. I told you, and I still think, we are playing with incalculable forces, forces that may prove entirely beyond our control. Nowhere in nature have we found isotopes in their pure, elemental form. Always they are mixed in definite proportions with their fellows. There must be some

reason for it, some stability that is thus acquired. We're trying to change all that. We're doing more; we're working with human beings, human characteristics, the most explosive possibilities in all nature. You know as well as I the status of cases of dual or multiple personalities. They are pathologic, diseased. There is always something wrong about them, something abnormal."

Ken took a deep breath, went on: "As I said, I was willing to go along up to this point." He pointed to the still immersed, still unmoving form of Horthy. "That particular isotopic form is incalculable, but fairly safe within certain limits. It was the dominant, the norm to a large extent, of the being the world knew before as Horthy. Very likely he will not prove appreciably different. But that other Horthy, the one who still is a cloud of unrelated ions, the one-per-cent being whom you wish to build up into a whole man—what will he turn out to be? We have no way of telling. The animals we worked with could give us no answers. Their physical forms and properties were the same as those of their mates, but we knew nothing of their intellectual, their emotional processes.

"This Horthy will be a pure recessive, something that never existed before in the history of the world. What monstrosity may he not turn out to be? What danger may there not be implicit in him for the rest of normal humanity?"

"Stuff and nonsense!" Stubbs interrupted angrily. "We've been over that ground before. The books are full of cases of dissociated personalities; my brother was an example. None of them was a monstrosity. You're letting your imagination run wild, Craig."

"But they," Ken argued, "were all compact within the same body. The other personalities, though dormant, must surely have had some braking



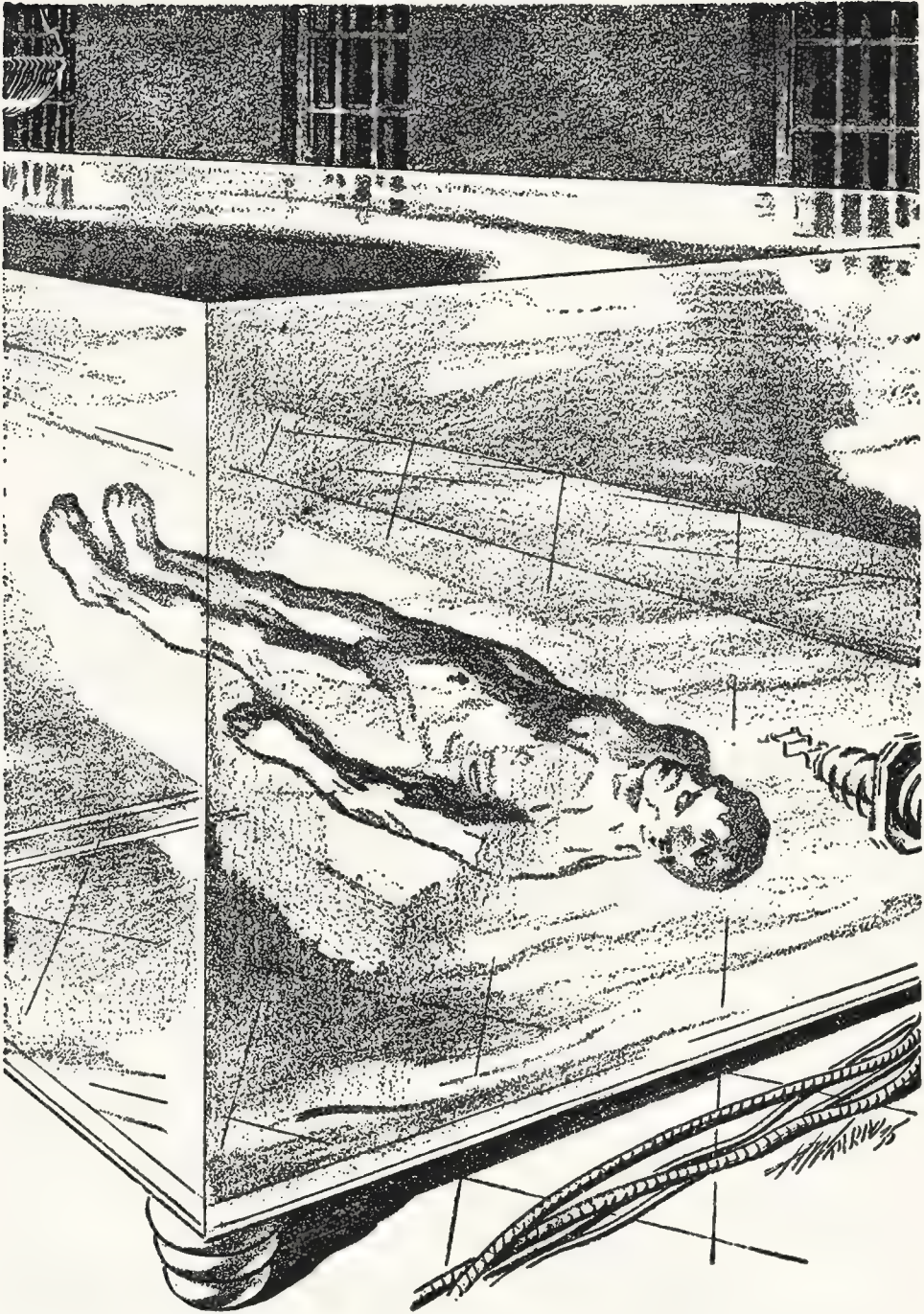
quality, some restraining influence. Here we are separating them completely, removing all restraint, all inhibition. Remember the story of Dr. Jekyll and Mr. Hyde."

"Bah! A scientist citing fiction!"

"Sometimes," Ken answered seri-

ously, "a novelist's intuitional genius hews mighty close to the truth."

Stubbs' face darkened. "I've wasted enough time listening to your silly croakings," he snapped. "Now get out of my way and let me go on with the experiment."



The features were still there but curiously misty, as they groped away from the positive electrode.

Ken squared his shoulders determinedly. Come what may, he would not permit that other Horty to be reintegrated. For a second the two men glared at each other. Then Stubbs moved forward.

"Just a moment." The scientist jerked around at this new interruption. It was Dr. Bascom, red of face, breathing hard.

"What is it this time?" Stubbs growled.

The prison doctor spoke rapidly: "In the absence of Warden Parker I am in charge here. Mr. Craig has said enough to convince me that he is right. I will not allow you to proceed any further."

"I have the governor's order," the scientist told him furiously.

"I've read it," Bascom responded quietly. "It states that James Horty be turned over to you for experimental purposes. It is not a pardon; it says nothing about remitting his execution as a condemned criminal. In the absence of higher authority I shall construe it myself. Horty must die according to law."

STUBBS' HANDS clenched violently; his eyes blazed. So menacing was his attitude that Bascom shrank against the wall. "Not," he ventured hurriedly, "that I'm stopping your experiment altogether. Horty must die. That—that part which is still unformed is Horty. If that dies, the law is satisfied. The other Horty is yours—to live, to do with as you please." One finger was close to a signal button. "If that is not satisfactory, I'll have to call the guards."

For a long moment Stubbs stood stock-still, clenching and unclenching his hands. The veins on his forehead swelled dangerously; his eye swept from defiant assistant to Bascom and back again. Ken had not moved from the controls.

"Very well then," he acquiesced sud-

denly. "Craig, help me lift Mr. Horty out of the tank."

Ken's withheld breath exploded with relief. That was better. He was sure Stubbs would soon realize the justice of his argument, agree with him. He sprang to the mechanism that actuated the crane at the negative electrode. The wire cradle dipped swiftly into the gelatin, closed beneath the immobile figure and lifted it, dripping blobs of jelly, out into the open.

The agitation of the jelly substance scattered the small cloud that had hung suspended in colloidal solution, roiled the ions into irreplaceable confusion. The other Horty was no more, was now dead scientifically as well as legally. The letter of the law had been observed. Horty had died, under the auspices of the State, yet Horty still lived. A paradox which occupied some space in the prison doctor's thoughts, but none at all in Ken's. He was a scientist, not a lawyer.

Together, the two scientists heaved at the body, carried it to a specially prepared table. Light-radiant machines pulsed into action. Healing, life-giving radiations glowed over the rigid limbs.

The tension in the room reached insupportable heights. The three men watched eagerly, waiting. Would the isotopic Horty come to life, as the smaller, less highly organized animals had done? If so, what would he be like? Questions that could only be answered by the thing that still rested stolidly on the table. In the minds of at least two of the three the sharp dispute of a minute before was forgotten, a sealed book.

Seconds passed, grew into minutes; the minutes ticked off interminably. And still Horty did not move, did not breathe. Strange emotions stirred in Ken. As a scientist he felt sickening despair at the apparent failure of the experiment. As a man, a human being, he was secretly glad. There were im-

plications in its success that he feared to face. His gaze clung to the extended body. It *was* Horty in every lineament and feature.

The man's eyelids fluttered suddenly under the beating light; his limbs twitched; the warm color of life infused his limbs. A simultaneous exclamation broke from the three men. They remained rooted to the ground, unable to move. It was a resurrection of the more than dead!

Jim Horty yawned, opened his eyes, looked bewilderedly about him. Slowly he raised himself to a sitting position on the table. He blinked in the dazzlement of the lamps.

Ken sprang forward, turned them off. "You're all right now, Horty," he soothed. "Take it easy. Here are your clothes."

THE MAN looked at him, then at the others with a puzzled, abstracted air, then he looked down at his ill-fitting stripes. He made a gesture of distaste, but he put them on obediently. Then he swung to the floor. A shudder rippled over him. He passed his hand over his eyes, as if trying to obliterate an awful vision.

"You know," he said slowly, and Ken noted with thumping heart that, though it was the voice of Horty, yet the diction, the modulations, had changed, become softer, more precise, "I had a dream, and it was a terrible one. I must have fallen asleep."

He looked again at his prison clothes, at Dr. Bascom. Then he smiled wryly. Somehow his brutish features were suffused with new light. "I'm to be executed, am I not? Well, I'm ready for it. The sentence was fair and just. I *was* a murderer. Funny though," and again that puzzled look crept into his eyes, "I must have been crazy, doing the things I did. Robbery! Murder! Why, I—I wouldn't hurt a fly! O. K., Dr. Bascom. Let's get over with it."

The prison doctor's eyes were literally popping out of his head. His mind whirled incoherently. His pudgy finger trembled toward the tank. "You—you were——" But the doctor couldn't go on.

"What the doctor is trying to say," Ken broke in sharply, "is that you have been pardoned. We just received word from the governor. You're a free man, Horty."

The reintegrated man stared at him incredulously. Then, surprisingly, tears rolled down cheeks that had never felt their channeled coursing before. "Thank God!" he murmured reverently. "It is beyond my deserts. My crimes were many and horrible, and should have been expiated. But now——" His shoulders squared. Already the heavy, cunning set of his features was subtly changing, shifting with inner transformation. "New life awaits me. I feel things stirring here—inside." His hand went to his breast. "I want to learn, to do things to help my fellow men, to keep them from the paths that I once trod."

Ken thrilled with glad relief. The miracle had happened. This strange, new personality, this being who had sloughed less than a hundredth of his former being, was refined of all dross in the isotope reintegration. There was no question about it. Horty's tones rang with sincerity, with conviction. Ken's glance shifted to the murky diffusion in the tank, and shivered suddenly.

What unutterable evil must have inhered in that minute residue, to have masked this greater personality, to make Jim Horty what he had been—a vicious criminal without a single redeeming human quality! Stubbs must see now that he was right, had been terribly right all along. Never again would he attempt to associate that dissociated, discarded personality!

Meanwhile the scientist was staring with devouring eyes at this being who

was incredibly his own creation. He felt drunk with godlike powers. Fame, power illimitable, beckoned dizzily. In his long, bony hands rested the future of the world. As in a glass, darkly, he saw the marvelous possibilities ahead. A race of beings, dissociated into pure states, no longer inhibited by clinging, dragging personalities! What might they not achieve!

But Ken had sensed the elements of danger, was even now revolving in his mind the means of eliminating them. Not so Stubbs. His single-track brain rejected all compromise contemptuously. His fanatical regard for science, for certain still inchoate thoughts, permitted no social elements, no humanitarian aspects to interfere with the course of pure experiment. Craig and Bascom had stopped him this once. A grim, unpleasant smile played over his angular features. Next time——

V.

THEY TOOK Jim Horthy back with them to the Stubbs laboratories on the outskirts of the metropolis. They hustled him out secretly, wrapped in a muffling overcoat, and whizzed him in a shade-drawn sedan down congested arteries of traffic. Dr. Bascom and Warden Parker had insisted on that. There was to be no publicity until they could communicate with the governor and clear themselves of official responsibility in this very complex and unprecedented situation.

Yet they had not escaped unobserved. An enterprising reporter, who had smelled a story in the abrupt refusal to admit outside witnesses to the execution of the notorious Jim Horthy, lurked outside the prison walls, waiting for something to break. He saw the huge gate swing open, the long, black-shrouded car slide through. Suspicious, alert, he followed his hunch, kicked the starter of his ancient car into life, and

rattled after it in close pursuit. Traffic being what it was, he was able to keep the speeding car in sight.

When it turned into the side road leading to Malcolm Stubbs' heavily endowed laboratories he was sure he had made no mistake; when, his car half hidden by masking shade trees, he saw Stubbs and his assistant, Ken Craig, emerge, and solicitously help down a figure swathed in a huge coat, his excitement grew. When, just as the trio crunched up the gravel walk, the coat collar fell away momentarily to reveal the only too well-known features of the criminal, the news hawk knew he had a whale of a story.

One hour later, to the dot, wild headlines flooded the city streets. JIM HORTY, NOTORIOUS MURDERER, SPIRITED SECRETLY FROM JAIL ON MORN OF EXECUTION. SEEN IN CUSTODY OF FAMOUS SCIENTIST.

Within an hour and a half hordes of reporters were clamoring for admission to the laboratories; Warden Parker was denying himself to all and sundry; the governor, immured behind bodyguards in the executive mansion, had discreetly disconnected the long distance telephone. The story had broken with a vengeance!

But before all that happened, another drama, more personal in its nature, and less world-shaking in its implications, was taking place within the close confines of the Stubbs laboratories.

The three men had hurried into the living quarters. Horthy sagged into a chair, still physically unstrung from the terrific transformation he had undergone, still mentally fumbling to express the inner changes that he felt.

Ken shrugged his coat off eagerly. He was brimming over with plans, with new experiments which opened before him in never-ending vistas at the triumphantly successful conclusion of this crucial test. He wanted to get into the

laboratory at once, to suggest certain problems to Stubbs. He had forgotten completely the late unpleasantness in the converted workshop of the prison.

But Stubbs had not. He had sat stiffly in the car while Ken drove, wrapped in impenetrable silence, nursing his anger, maturing certain plans of his own.

"You had better put your coat on again, Craig." His voice was tinged with venom.

Ken stopped short. "Why?" he asked in some surprise. "Are we going out?"

"*You* are going out," Stubbs answered vindictively.

"What do you mean?"

"I mean, Mr. Craig," Stubbs retorted, "you are discharged, fired, no longer in my employ."

KEN braced himself. "I see," he said quietly. "You want your assistant to be a 'yes-man.' You want no brake on your inordinate ambitions. You are a great scientist, Mr. Stubbs, but you haven't the true scientific spirit. I saved you a little while ago from an experiment that might have ended disastrously, not only for us, but for the human race. You are now venting your spite on me for that; you are afraid that I might try to prevent you again. You are right. I would. I'm warning you again. Think long and hard before you even repeat what we have done so far. Make sure there are no secret defects; wait at least a year for them to appear. That is the way of science; that is what distinguishes research from charlatanry."

"Get out!" Stubbs growled, his voice thick with passion.

"Good-by," Ken answered evenly. "And remember what I said."

Slowly he turned toward the door. It was a wrench, this being cast off at the moment of fruition. He knew that Stubbs wanted to hog all the limelight for himself. That did not matter. Ken

preferred to remain in the background, even though he had contributed toward this particular bit of work more than Stubbs was willing to admit. But the epochal experiment was only beginning.

Horty, the pure isotopic man, was not merely a scientific problem; he was a human, a social problem. Stubbs was not the man to cope with that side of the situation properly. Ken felt a sinking sensation. What did Stubbs intend doing next?

Horty stared bewilderedly from one to the other during the altercation. Somehow his new personality instinctively trusted Ken Craig, and just as instinctively shrank from the cold angularities of Stubbs.

"Mr. Craig!" he called suddenly.

Ken stopped, turned, looked at him inquiringly.

Horty blushed—a novel sensation. His heavy features worked with strange emotion. "I—I would like to go with you," he stammered diffidently.

"No you don't," Stubbs snarled. "You stay here with me, as long as I want you. You're *my* experiment," he was shouting now, "and I'm not through with you by a long shot."

"But I don't understand," Horty answered helplessly. "I thought the governor had pardoned me, that I was free."

"*Free!*" the scientist echoed sardonically, and laughed. It was not a pleasant laugh. "You're dead, Horty, do you understand? The legal part of you is back there in prison, scattered into indistinguishable atoms. You're just a resurrected chattel, a mere part of a man, an experimental creature."

A frightened look crept into Horty's eyes. "Is that true, what he's saying?" he appealed to Ken.

The young scientist controlled his seething anger with an effort. He had not known Stubbs could be so brutal. "Only in part," he said gently. "But

"I'm afraid you'll have to stay here until I can get in touch with the governor."

"The governor will back me up," Stubbs informed him nastily. "I have enough influence for that."

THAT AFTERNOON, ensconced in the home of an old college friend, Ken saw the newspapers. The storm had broken in a torrent of headlines. Stubbs, in his eagerness for adulation, for fame beyond that of any living being, had broken his pledge of secrecy. The doors had been thrown wide open to the reporters. Stubbs had spoken on and on, had squeezed the last ounce of publicity from the interviews.

Horty had been exhibited, prodded, as though he were a guinea pig. Nowhere, in all the innumerable details, was there any mention of Kenneth Craig. It was Stubbs, Malcolm Stubbs, from beginning to end.

Bill Maynard threw the papers down with a chuckle. "You evidently were the janitor, or housemaid, in that establishment, Ken."

William Maynard had roomed with Craig at college before their paths diverged into their respective fields. He was a psychologist of repute, one of the younger generation who was pushing brilliantly to the fore. He dismissed as nonsense the mystical terms with which psychology was all too often impenetrably inwrapped. Psychology was a science, he proclaimed, or nothing at all. As such, its practitioner must have a good working equipment of the other sciences, and must discard as idle theory all that was not susceptible of rigorous proof.

Craig groaned. "That doesn't bother me one bit, Bill," he said earnestly. "I'm thinking of poor Horty for one; and the future of the human race for another."

Maynard sobered. "You're right," he answered thoughtfully. "This business is right down my alley. It's the biggest, most important discovery since

—since—why, blazes, man, it's *the* biggest in the history of mankind! Making two human beings where there was one before. Splitting a man into his pure, component parts. It's tremendous; it's more, it's ghastly. I know a little something about the workings of the human mind. You can't take away what was an integral part without hell popping somewhere, sometime. Mark my word, we're not through with Horty by a long shot." Which was a prediction to be fulfilled in a most unexpected, astonishing way.

When Ken was finally able to break through to the governor, it was too late. Stubbs had brought his powerful influence to bear first. Ken was informed politely, but firmly, by a third assistant secretary, that the new creation that was Horty was the exclusive ward of Mr. Malcolm Stubbs, the great scientist. And that was that.

Ken lived in seclusion at Bill Maynard's for the next few weeks. His friend had generously given him the run of the house, of his psychological laboratory, and also sufficient money to provide for his modest needs and even more modest equipment. There were certain tests Ken wanted to make, even though he could not hope to duplicate the very expensive and elaborate resources of the Stubbs endowment.

For two weeks the sensation grew and grew. The fact that there was a War in Europe, pregnant with sinister possibilities of universal embroilment; the fact that the West had broken out in a rash of fierce, bloody strikes; the fact that China was going Communist and India was in revolt, were all relegated to inside pages, next to the obituary columns, and wholly overlooked by the average man.

Scientists trooped from all over the world to the Stubbs laboratories; countless thousands of sight-seers milled day and night before the heavily guarded portals, battling for a glimpse of the

man who had been through the shadow of death, and returned, a strange, new personality.

The "Isotopic Man," he was christened by a phrase-making editor, and the name stuck. He was examined, prodded, exhibited, lectured on, his subconscious probed, his unconscious, too, by psychologists picked by Stubbs.

Bill Maynard applied for permission and was turned down. Horthy was given intelligence tests; lie detectors were strapped to him; questionnaires, sensible and silly alike, bombarded his bewildered head. In short, he was not a human being; he was a guinea pig devoted to the cause of so-called science.

Ken fumed. Whatever chance there had been of calm scientific consideration of the results of their remarkable experiment was gone forever.

"He should have been placed in normal human and social surroundings," he raged into Bill's sympathetic ear. "Then and then only could we have determined whether a pure dissociated personality was advantageous to the individual himself and to society, or not. But now, with this horrible ballyhoo and roar of publicity, nothing that Horthy may develop into will mean a thing scientifically."

THE UPROAR continued, grew to hurricane proportions. Stubbs revealed himself as a master of artful propaganda, as a genius for self-advertisement. The whole world laid all else aside, lapped up with insatiable thirst the endless bulletins that paraded from the Stubbs laboratories. The investigation of the imported psychologists, scientists, sociologists, what not, were put in printed form and sold by the millions.

Ken and Bill read them eagerly. The men were competent in their fields. The reports, as far as they went, were honest. There was no question that James Horthy was a distinctly new personality.

The criminal, the cruel murderer, the man with the twisted brain and the low cunning of the underworld, had vanished. The new Horthy was humble, kind, sensitive to the sufferings of the tiniest insect, eager to learn, and withal, mightily bewildered by the tremendous hullabaloo of which he was the center.

Bill read them through and tossed them across the room with a profane gesture. "Superficial hooey," he remarked disgustedly. "Tests any child could give. The all-important things have been left discreetly untouched. What, for example, has happened to the vacuum created by the loss of the heavy isotopic personality? He is not a whole man; he is only ninety-nine per cent of one. Has he been confronted with any moral situation which requires quick, volitionless decisions? How have his instincts been affected? A million and one problems that have been left untouched."

And were to remain untouched. For soon the Machiavellian hand of Stubbs disclosed itself—what he had been secretly planning for throughout the unprecedented exploitation.

One day the bombshell burst. The newspapers fairly shrieked with it. A hundred selected members of the unemployed were to be subjected to the dissociation apparatus of Stubbs, were to be reintegrated as pure isotope personalities. The way had been prepared; the proper officials had been convinced.

"Look what happened to Horthy, the condemned murderer, the man whom society had given up as hopeless," Stubbs had argued to the high and mighty individuals whose consent was necessary. "If such a remarkable transformation occurred with such unpromising material, what might we not expect from men higher up on the scale. After all, these unemployed are a drain on the community. The reason they have lost out in the struggle for existence is because their separate personalities

are constantly clashing, constantly inhibiting each other, and making their net efforts futile."

This, of course, was a wild generalization on the part of Stubbs, based on no ascertainable evidence, certainly on nothing involved in the investigation of Horty's case. But the highly placed officials did not know that, and Stubbs was now a figure of international importance.

Furthermore, anything that would take these men off relief was eagerly to be grasped. Taxes were mounting heavily, and certain powerful business men were complaining. So consent was granted, all in the name of science.

Such was the power of propaganda that the idea was at once universally acclaimed. No one raised his voice in objection; no one, that is, except the selected hundred and their families. But their protests were swept aside as impertinent and showing a dangerous tendency toward radicalism.

"What do these ignorant protestors against the march of scientific progress expect?" one influential newspaper editorialized indignantly. "That they are to be kept on the relief rolls indefinitely, at the expense of more capable and more industrious citizens? Here is a chance for them to be remade, so to speak, so that they may earn their own livings, and not rely supinely on the bounty of others, yet they protest. Protest, forsooth! If anything proved the necessity of their submission to Mr. Stubbs' process, it is the very fact that they *do* object."

Ken Craig and Bill Maynard objected, too. But no one listened. One editor who took the matter up with Stubbs was told that Craig was a disgruntled employee whom he had been compelled to discharge for utter incompetency and worse, and thereafter Ken was *persona non grata* in all the forums where public opinion is plastically molded.

So, with a fanfare of trumpets and editorial handsprings, the great experiment went through. A huge tract of land was set aside for experimental purposes. High, barbed fences surrounded the hastily erected buildings; armed guards patrolled the grounds day and night. The disconsolate men were torn from their weeping families and hustled into the inclosure. A series of tanks had been set up, with a multiplication of mass spectrographs, reintegrators, electrical generators, healing rays, and other essential equipment. Stubbs was preparing for large-scale production. Funds were unlimited.

VI.

THEN CAME the fateful day. The unemployed were narcotized in batches, thrust into the tanks of gelatin. Duly they were ionized, dissociated, reintegrated. This time there was no Ken Craig to croak warnings. Furthermore, a certain military gentleman had been tremendously interested in the proceedings. Not, you understand, in their scientific aspects, and certainly not in the possible raising of the ethical standards or mental ability of the Isotope Men. It was the physical duplication, or triplication even, of available cannon fodder that caught his undivided attention.

Why, he argued, should this country wait for the slow, natural processes of birth and growth? Here, at one swift stroke, it was possible to double the manpower of the nation. His mind dazzled at the glittering vistas it opened, of tremendous armies called literally into existence with the aid of a scientific wand. He saw himself in the rôle of a new Alexander, a new Ghengis Khan. The economic and social dislocations to a country already staggering under a peak load of unemployment did not enter his simple calculations. He was a soldier, a machine geared to one task only—war! So Stubbs had the necessary back-

ing for what he had secretly intended all along.

Accordingly, the reintegrators were focused on *all* the inchoate masses of isotope atoms as they moved with varying degrees of speed through the specially treated gelatin. In five of the hundred cases, three personalities had dissociated themselves under the selective thrust of the tremendous current.

The dominant isotopes, the ninety-nine-per-cent men, were easily handled. The technique had already been mastered, thanks to Ken's unheralded, unacknowledged researches. The one-percenters, or fractions thereof in the case of the triple dissociations, required more careful consideration. Here, though Ken had worked out the theoretic answers for Stubbs, more than once the great scientist fumbled, and wished vaguely that Craig was back.

Very carefully and very slowly the requisite elements were injected into the misty, ghostlike wraiths of the unformed men—in tiny dosages, in fixed, unalterable proportions. And all the while the reintegrators kept up their steady patterned beat of rays, molding the new material into the interstices of the sketchy personalities, filling them in gradually.

It was a delicate process, and Stubbs did not possess his former assistant's sureness of touch. As a result there were many casualties, personalities that vanished again into irretrievable conglomerations of atoms. And there were others that did not vanish, that actually came to life. These, because of the bungling technique, were such monstrosities, such frightening apparitions out of a mythical, wonder-working past, that Stubbs, secretly and in scared haste, destroyed them with powerful corrosives as they lay quiescent, immobile, within the transparencies of the gelatin.

For minutes after, he sat gasping and shuddering in his chair. He had been given an intimate vision of the inner-

most hells of deformity, of things that only a Doré or a Daumier could have drawn. Suppose, he thought with a shiver, these physical gargoyles he had just destroyed had mental counterparts, hidden underneath the normal human exteriors that lay in the other tanks. Was that whippersnapper, Craig, right, after all? Were these recessive isotopes pure, unmitigated evil, held only in check by the dominant personalities? Was he playing with forces that might prove uncontrollable?

It was only for a moment that these doubts assailed him, however. He even laughed sardonically at himself. He, the great Malcolm Stubbs, pausing in his triumphant career because of silly warnings. The experiment was successful. There was no doubt about that. Of the dominant isotopes, every one of the hundred was even now stirring back to life under the ministrations of discreet assistants, chosen more for their manual dexterity and humble fidelity than for brilliant scientific achievement. And of the recessive personalities, some fifty-odd were salvaged, expanding with the warm hues of life under the healing rays. An excellent percentage, Stubbs exulted in righteous self-satisfaction.

The hundred dominant isotopes were paraded for the delectation of a wildly acclaiming world. Scientists went to work upon them immediately. The results were astonishing. These had been originally men of average intelligence, possibly a trifle subnormal, according to the good American gospel that talent and industry must necessarily win material success.

NOW, HOWEVER, their intelligence quotients ranged from 140 to 160, evidencing remarkable mental agility that fell just short of genius. Nor, this once, were the figures misleading. Placed experimentally at their former jobs, they outdistanced all their mates,

shot meteorlike to the top of the heap. Labor-saving devices, efficient short cuts, machine improvements, were suggested by them in rapid succession. Their hands were deft, their brains nimble.

Big business was in an ecstasy. Profits increased mightily in the industries favored by their presence. It was possible to cut down on working staffs. As a result normal human beings found themselves swelling the ranks of the unemployed. A clamor arose for more of these marvelously efficient isotopes. This time it was not necessary to conscript subjects. Those who had been thrown out of employment volunteered eagerly. The number of applicants grew into the thousands, the hundreds of thousands.

Stubbs set up auxiliary laboratories, turned them out in machine batches. A driving fanaticism held him to his task. His ego expanded, inflated to tremendous proportions. His name was a household word; he was mightier than kings and dictators. The new isotopes were now of all classes.

Struggling authors, imitative painters whose work had never sold, routine laboratory technicians, plodding business men, dissatisfied with their present lot, went eagerly into the dissociation tanks.

Within a month the Isotope Men had made a bloodless conquest of the United States. Hacks became geniuses; petty storekeepers grew into captains of industry; obscure scientists developed world-shaking theories of Einsteinian proportions.

This made for unforeseen complications. The former leaders in the arts, in science, in industry, were being ruthlessly thrust aside by the coldly efficient Isotope Men. No longer were they the salt of the earth; now they were average, or even subaverage. A wail arose. Then one of the cast-off chemists, a former Nobel winner, had an idea. If

the dissociation of personalities made geniuses out of normal, average material, what might it not do for those who were initially men of talent, of more than talent?

Tremblingly he submitted to the bath, while his fellows waited with bated breath. The result was astounding. The isotope chemist within a week had solved problems in his field that had been deemed insoluble. A new element was added to the list of those already known, and he announced that already he was on the trail of practicable atom-smashing.

Thereupon all doubts ceased. There was a rush of hitherto world-famous men for the dissociating bath. Stubbs' resources were taxed to the utmost. A new era was dawning for the earth. A race of supermen, godlike in proportions. Humanity transfigured, rising soon above the poor planet to which it had been chained, achieving the planets, nay, the stars themselves!

Certain small symptoms were unnoted in the accelerating rush of events. Symptoms, however, that held in themselves the seeds of destruction. But for the present the future was a shimmering mirage. Malcolm Stubbs was practical dictator of the world.

But he was no fool. Already he had noted that these creations of his were outstripping him in his own special field. In short order his carefully guarded secret process would be duplicated, improved on, and he, the only begetter and initiator—you see, he had by this time forgotten that Kenneth Craig had ever existed—would be shouldered aside just as the leaders in other fields had been.

For in this new world of Isotope Men there was no room for pity, for compassion, for the nice amenities of life. They were supermen, hard, efficient, ruthless—with the possible exception of Horthy. No inhibitions held them back; no recessive isotope personalities acted

as secret brakes. They were single-purposed, driving, subject to no doubts or indecisions. Sometimes they pushed to extravagant lengths on small matters that normal people would not have bothered with. The seeds of future difficulties were there.

Nor were they exactly happy. There were times when almost unbearable aches stirred through them, when every atom, it seemed, yearned vaguely for something that was missing, for something they could not find. These manifestations, however, were rare in the beginning; and of short duration. The spasms came and passed almost immediately.

So, one memorable day, to the hosannas of an excited world, Malcolm Stubbs, stiff and immobile under the narcotic, was carefully lowered into his own dissociation bath, and two new Malcolm Stubbs appeared in due course to the sight of all and sundry.

WE HAVE NOT as yet discoursed on the recessive isotopes, the one-percenters who were fed and nurtured until they became seemingly whole human beings. There had been good and sufficient reason for this. In the first place, it took time and considerable effort to bring them to that state. In the second place, it had been deemed wise to secrete them from the general view, even from the sight and knowledge of their fellow isotopes, their complementary personalities, so to speak. For they had proved somewhat of a shock to Stubbs.

In every limb, in every feature, in every bodily mark and pattern, they were twins with their counterparts. So much so that it was positively frightening, so much so that at first there were several confused shufflings in which recessives were sent out into the world and dominants placed in camp.

The military gentleman had taken charge of this second batch. It would

not do to have identical twins, between whom it was impossible to differentiate, walking and living in the same paths of existence. The possibilities for confusion, for worse, were obvious.

It *would* be somewhat of a shock for a man to see his mirror image approaching him in the street; family life would be subjected to certain alarming or ludicrous situations, and in industry, politics, anything might happen.

So the recessives were spirited away into a huge concentration camp in the heart of the Great Smoky National Park. By the end of six months there were a hundred thousand of them. The military gentleman was in ecstasies. He trained them and drilled them daily in the use of modern arms, in the minutiae of warfare. Soon, he figured, he would have enough to start on his career of conquest. Nothing less than the domination of the world floated before his vision. And that, mind you, without tapping the regular man-strength of the country, without dislocating in the slightest the normal processes of the nation.

These recessives, too, had undergone testings. Outwardly they were counterparts of their fellows. Inwardly, however, there was considerable difference. For one thing, they were not supermen. Their abilities did not run to the arts, the sciences, to all the differentiating talents that make of the human race an endless and infinite variety. Rather, there was a certain essential sameness about them all, a certain monotony that seemed to indicate a definite bedrock of the human race.

This bothered Stubbs vaguely at first. There was something terrifying in their primitive likeness. They did what they were told, obediently, yet sullenly. Their intellects seemed subordinated to the emotions, to deep-seated instincts. This, of course, did not bother the military gentleman in the slightest. As a matter of fact it was cause for further

congratulations. Ideal soldiers, he chortled, good cannon fodder!

Yet, underneath, flashing into manifestation like fireflies on a moonless night, and as suddenly extinguishing, were certain traits which escaped the testing psychologists. A certain secretiveness, a certain furtive cunning, a certain electrical sparkling between recessive and recessive, as if they were all mystically united in a common bond of racial integrity. But their drilling, and obedient marching went on.

The new Stubbs regained easily his former leadership. His bleak fanaticism intensified; all hesitations, all former doubts, were gone. He became Dictator of the Americas. He took over, bag and baggage, the secret plans of the military gentleman for his own use, much to the latter's discomfiture. With inward raging and outer submission, that individual took subordinate command.

Once, and once only, did the new Stubbs feel at a loss. That was in the beginning, when the recessive Stubbs was brought before him. He had had sufficient intellectual curiosity to wish to see his counterpart, and he had felt an understandable aversion to a part of him being herded to the concentration camp.

But that one experience was enough. Every atom in his being flamed out toward that other Stubbs. It was the longing of a lover for his mate, a million times intensified, a wrenching, sickening force that left him weak and trembling and afraid.

Had Stubbs been a student of the classics, as was Craig, he would have known what had happened, would have realized immediately to what dreadful consequences his violent disruption of the human complex into its pure isotopes was inevitably tending. Plato, in his Symposium, expressed the situation in words and phrases that were a re-

markable prophecy of what Stubbs had actually achieved.

In the eyes of the recessive Stubbs a flame also leaped; but it was not of longing. It was the flame of unquenchable hatred for this physical counterpart. Then, almost at once, it died into blankness.

Stubbs shivered. "Take him away," he cried to his assistants. "Send him to the camp. I don't ever want to see him again." Submissively, without even a backward glance, the other Stubbs shuffled out of the room, and was lost to his sight.

VII.

DURING this six months of world turmoil and tremendous, seething events, Ken Craig and Bill Maynard remained stubbornly aloof.

While the thousands rushed for the dissociation tanks, they stuck to their laboratory, normal, whole human beings. In the new regime of supermen they were anonymous individuals, inconspicuous for learning, for dazzling new discoveries. Yet they were content.

The feeling had grown on them through the great change that there was something radically and terribly wrong about it all. They could not put exact fingers on it, but every time they encountered an isotope man the feeling struck them with redoubled force.

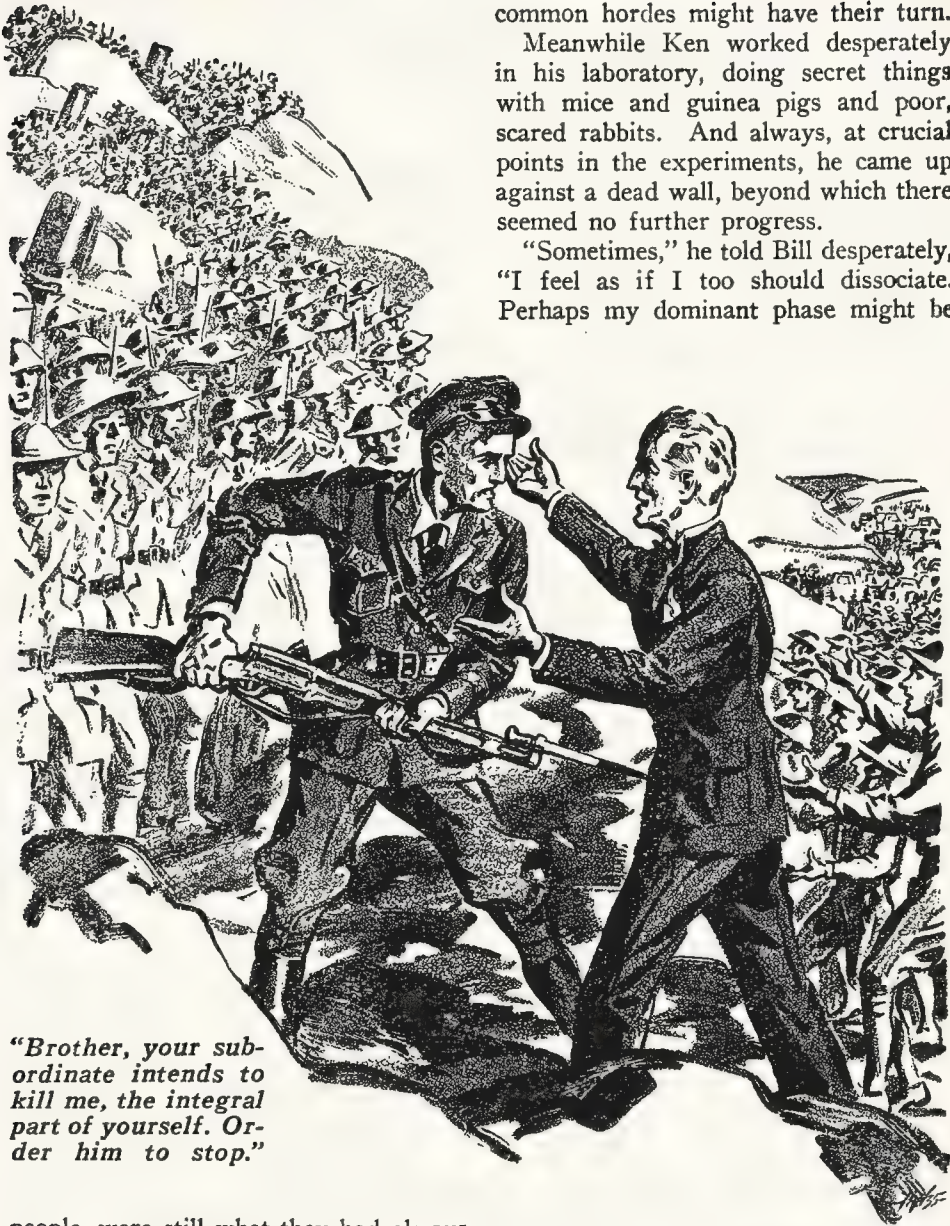
"As if," Ken remarked, "there were a missing element. As if any moment the whole precariously balanced structure would tumble into disintegration before our very eyes."

Yet the months passed and nothing happened. More and more went into the baths. There was hardly a man of prominence, of recognized ability and talent, in the United States, who had not been dissociated into his various personalities. Only the dull average, the great mass of ordinarily anonymous

common hordes might have their turn.

Meanwhile Ken worked desperately in his laboratory, doing secret things with mice and guinea pigs and poor, scared rabbits. And always, at crucial points in the experiments, he came up against a dead wall, beyond which there seemed no further progress.

"Sometimes," he told Bill desperately, "I feel as if I too should dissociate. Perhaps my dominant phase might be



"Brother, your subordinate intends to kill me, the integral part of yourself. Order him to stop."

people, were still what they had always been, a natural mixture of isotopes.

Not that they wished for that undesirable state. They clamored for dissociation; they besieged Stubbs with eager cries. It was physically impossible as yet to handle millions. Those who gave evidence of superman possibilities came first. Later, years later, the

AST-5

able to solve the problems that puzzle me now."

Bill looked at him humorously. "That would be jumping out of the frying pan into the fire," he observed. "Better stay your own dumb self and take no chances. Besides, there is no necessity as yet for your researches to be brought

to a head. So far, the isotopes seem to be inheriting the earth."

"I have a feeling that it won't last much longer," Ken declared prophetically, and plunged back into his work again.

He was right. The first intimation of trouble came from an entirely unexpected source. One night, just as Ken was leaving the laboratory in bleary-eyed despair, there came a timid, yet insistent knock on the front door.

Bill, in slippers and dressing gown, was comfortably ensconced in a lounge chair, reading the latest report of an isotope psychologist on certain neuron paths in the cortices of the brain. He read on in fascinated interest. Here, in luminous detail, were proved theories at which he himself had only dimly nibbled. He had known the man in his pre-dissociated state as a dull, plodding sort of a fellow.

"Good night!" he muttered to himself. "Perhaps Ken is wrong after all. Perhaps—" Then came the knock.

With an exclamation of annoyance he shuffled his slippers to the door, while Ken, coming in from the lab, threw himself wearily into the chair he had just vacated.

Ken heard the door open, saw the dim, muffled figure, heard Bill's sharp exclamation. Even when the midnight intruder walked into the room, he did not at once raise his head.

Then a voice, timid, yet filled with strange excitement. "Mr. Craig! Mr. Craig!"

He looked up quickly, gasped. Before him stood a heavy, low-browed individual, with jutting jaw and unprepossessing features.

"Jim Horthy!" he cried.

THE ex-condemned criminal was quivering with unnamable dread. "Yes, sir, it's me. I've got to talk to you."

"But where have you been? You dropped out of sight."

Horthy reddened. As a matter of fact, from the most publicized man in the world, he had gradually been shuffled into the background, until even Stubbs had forgotten his very existence. He was free to come and go as he pleased, and when he finally disappeared, no one seemed aware of it.

"Well—I—that is"—he looked around in some embarrassment—"I was sort of hanging around the camp in the Smokies."

"What on earth for?" Ken demanded.

His embarrassment grew. He shifted his weight from leg to leg. "Well—I was sort of hoping I'd see my other self. You know, the other guy from whom you dissociated me."

Ken and Bill exchanged quick, significant looks. This was important; it might mean—

"There wasn't any other self, Jim," Ken said kindly. "He was permitted to die, to—uh—satisfy the law's requirements."

"Oh!" Horthy gulped. "But that wasn't what I wanted to tell you, sir. Hanging around like that, I found out something."

"What?"

"The recessive fellows are revolting. They've started already on the march. They've got guns and bayonets and everything. They want to run the world themselves, they say. They've no use for their other selves; in fact, they hate them like poison."

Ken jumped to his feet. "Are you sure of what you say?" he demanded sharply.

"Certainly, sir," Horthy repeated doggedly. "I saw them myself. They overpowered their guard, killed them all, including General Hamilton." That was the military gentleman. "I just managed to get away in time. I got a fellow to take me here in a plane. I knew you could do something about it."

His pathetic admiration was wasted on Ken. "Just what we were afraid

of, Bill," he told his friend grimly. "The recessives had masked their true inner nature all this time, waiting until they could be sure of success. They are the fundamental brutes, the apemen in us, from whom we had risen so slowly and painfully through the ages. We have torn them loose from their overlaying selves, the dominant isotopes, and now we must suffer for it."

Bill wrinkled his forehead. "I don't understand it," he protested. "They possess, of course, the primitive cunning of their—or rather *our*—ancestors. But this move must have required organization, ability that I should have judged beyond them."

"I ain't finished," Horty interrupted. In his eagerness his speech had reverted. "They *got* a leader, and he's"—he looked furtively around, finished in a whisper—"Mr. Stubbs!"

"What?" It was a simultaneous exclamation of disbelief.

"I seen him myself," Horty declared stubbornly.

"Impossible!" Bill retorted. "Stubbs just appeared on the televue with an announcement. It showed him at the laboratories. Besides, what the devil would he be wanting to revolt for? He's dictator right now."

"Hold on," Ken exclaimed in excitement. "I've got it. The man whom Horty saw was Stubbs all right. The *other* Stubbs. The recessive that Stubbs, the dominant, must have hustled to camp to get rid of. I could well understand why." Ken moved quickly toward the door.

"Where are you going?" Bill exclaimed.

"To warn Stubbs. He brought it on himself, and I certainly don't feel particularly kindly toward him. But this is different. The fate of the world is involved. Let those recessives gain control and——" His voice trailed off, but it was only too evident what he had in mind.

"I'm coming, too," Bill decided.

Two minutes later the three men were sliding swiftly through the deserted early-morning streets of New York, pushing their car to the utmost. Up through the Bronx, they raced; up the Albany Post Road, flinging left into the side road that led to the Stubbs laboratories with a scream of recalcitrant tires.

STUBBS, awakened at their insistence, viewed Craig with cold, hate-filled eyes. Somehow, he felt his former assistant to be a threat against the new order he had created. Ken returned his look with interest, but there was no time for that. He explained rapidly.

Incredulity lurked in the dictator's gaze when he had finished, even after Horty's breathless corroboration. The name of the rebels' leader brought a sharp pang to his system, a resurgence of that former overwhelming feeling, mingled inextricably with queer dread. He had tried to school himself against the thought of that other ego, so like himself, yet so different.

"If this is a hoax," he said angrily, "I'll——" He left the threat hanging, moved toward his communications visor. Even as he did so it buzzed, sprang into life. A badly frightened isotope, Governor of the Southeastern Coastal District, leaped into being.

"The recessives have broken loose," he gasped. "A hundred thousand of them. They—they're animals, sir. They're killing and burning and wallowing in blood. They're attacking the town now. Guns, modern artillery, everything. We can't hold out much longer unless we get help."

A concussion of sound shook the televisor. The governor jerked around, threw up his hand in terror. To the rear, a door burst inward, and a horde of savage-looking men streamed in. Before the helpless, horrified eyes of the onlookers they deliberately bayoneted

the governor, stabbing again and again with fiendish delight. Then they threw themselves down on the blood-smeared floor, and lapped with greedy tongues at the thing they had mangled. Bill felt suddenly sick. He could look at that far-off scene no longer.

One of the creatures raised himself, saw the televisior. For one long moment Stubbs, the recessive, stared with hate-filled, triumphant gaze into the paralyzed eyes of Stubbs, the dominant. Isotope confronted isotope. Then, very deliberately, his fist lifted, and the image shattered with a shiver of broken glass. The visor screen went blank.

"Now do you believe?" Ken asked bitterly. He was shaken to his very core by what he had seen. Yet even in his bitterness, his anger against this man who was solely responsible for the horror that had been unloosed upon the world, he felt quick pity.

Stubbs stood there, rigid, immobile, his face more angular in its sudden hollowness than ever before. He had seen himself, the thing he had held in leash all his life, and now had freed into the very embodiment of primitive evil.

"You were right, Craig," he whispered through stiff lips, "and I was wrong. I have done a damnable thing." No one could know what that confession, that apology, cost him.

Then his face hardened. He sprang to the visor screen, pressed button after button. Orders crackled from his lips with machine-gun rapidity. The supermen were being mobilized. Strange weapons of offense and defense that Ken had never heard of were named for instant use. The isotope scientists had evolved terrible engines of destruction. Yet always, monotonously reiterated, Stubbs insisted to all his subordinates: "The recessive Stubbs, my isotope, is not to be harmed, on peril of your head. Seize him, guard him well, and bring him to me."

VIII.

CRAIG AND MAYNARD went with the first army that had been mobilized to suppress the rebellion. Horthy refused to go. The erstwhile criminal looked sick at the very thought. Killing a human being, he declared, even in self-defense, was murder!

The unit moved swiftly, in small motorized tanks capable of a hundred miles an hour over the most rugged terrain. The superisotopes were grim, purposeful, efficient in their every move.

Stubbs, bleak and craggy as ever, led the van. Ken and Bill sat at his side, marveling at the smoothness with which the beryllium-steel tank ripped down the southern highways.

Reports came to them at five-minute intervals by radio from fast scout planes. The rebels had scattered, were traveling now in small bands, mopping up the countryside with remorseless thoroughness. Ken saw the results of their handiwork as the tank entered the devastated area. It was frightful, hideous.

Everywhere were smoking ruins; everywhere the butchered bodies of men, women and children stared up with sightless eyes at the smoke-grimed skies.

Ken's eyes narrowed. Bill muttered: "Good Lord!" over and over. But Stubbs maintained a flinty silence. His eyes passed over and through the shambles with far-off blankness.

Early that afternoon they made contact. The ether cracked with messages. A scout plane reported the presence of a large body of the recessives at the site of what had once been Charlotteville. Now it was a pillar of fire and a cloud of smoke in which the dim-seen forms of the yelling horde seemed like sooty demons.

Stubbs snapped out orders into the transmitter unit. The tanks wheeled swiftly, surged with smooth, endless

motion over fire-seared earth toward the beleaguered town. The distance was eighty miles. They made it in fifty minutes.

Ken's hands clenched fiercely as they swept over a ridge, saw the shambles ahead. A half dozen planes were diving headlong, recklessly, toward the flame-shot, ruining town. Tiny figures squatted on the ground, pointing long-barreled anti-aircraft guns at the diving targets. The earth shook with the thunder of exploding bombs, the dull concussions of motorized artillery. The lurid flare of burning houses made a sinister back-drop to a hellish scene.

One by one the planes jerked in mid-air as if on a string, crashed in flaming destruction to the ground.

"For Heaven's sake, Stubbs," Ken exclaimed, "give the signal to attack."

But the isotope scientist made no move. His eye was glued to the telescope that angled through the armored roof of the tank, straining with desperate eagerness to distinguish those far-off figures—as though he were seeking for some one he dreaded to see.

But the recessives were already aware of the appearance of these new enemies. Huge guns swiveled around. Puffs of white smoke rose lazily. The air was suddenly filled with whining concussions. Two of the tanks shuddered, heaved, and exploded into a thousand hurtling fragments.

The transmitter buzzed with angry clamor. Why wasn't Stubbs signaling an attack? Were they to wait until they were picked off one by one?

But still the scientist said nothing. He seemed in a trance, a moveless figure at the periscope. Shells hurtled by, searing the atmosphere with the friction of their flight. Another tank disintegrated.

"What the devil!" Bill ejaculated. "If I only knew how to manipulate these damned weapons!"

But Ken had sprung to the radio,

shouldering Stubbs rudely out of the way. He flipped the transmitter open, barked out orders in the staccato brittle accents of the bemused dictator.

A ROAR of acquiescence swept back through the ether. Tiny, blue flames flickered from outlets in the smooth surfaces of the still-surviving tanks. Ridiculous little lights that seemed to end not a foot away from the point of origin.

Yet Ken, watching the distant town through the view porte, gasped in incredulous astonishment. Guns, men, motors, even the back-drop of flaring embers, seemed to whiff out of existence in a long, clean swath. A deep, conc-shaped furrow extended suddenly through smoking fields, with its apex at the tanks, and its base the obliterated town.

"What—what was that?"

Stubbs looked dully at him. There seemed unaccountable fear in his eyes, and his angular face was quivering. "That?" he echoed. "Merely an atomic disintegrator. Nothing at all!"

"Great heavens!" Ken exploded. "You mean to say you discovered *that* principle already?"

"Mere child's play," the scientist answered indifferently. "Half a dozen men came upon it simultaneously. But when——"

The radio drowned him out. "District Supervisor Graham calling the commander!"

Stubbs opened the transmitter. "What is it?" he asked wearily.

"Sir, we've located the main body of the recessives. They're entrenched on a mountain five miles due southeast from Hagerstown. We've just come up with them, sir. What are your orders?"

"Attack, of course. What are you waiting for?"

The unseen voice seemed to hesitate. When it came through again, it sounded apologetic, even a bit afraid. "I don't

know what's come over our men, sir. I—I wish you'd come up and take command yourself."

"I'll be there in an hour, Graham," Stubbs snapped. "Too bad you can't handle the situation yourself," he finished sarcastically.

"That will be splendid, sir," Graham answered eagerly. And his voice stilled.

Exactly an hour later the tanks pushed up the steep slope to the huddled ranks of the isotopes. Some ten thousand there were, with strange, squat-looking machines in serried rows, their wide, gaping mouths pointing upward at the mountaintop. There seemed trouble among the isotopes. They were gesticulating and arguing angrily among themselves.

Stubbs jerked out of the tank stormily. The strange paralysis that clogged his faculties back at Charlotteville had fallen from him like an outworn cloak.

Ken and Bill hurried out after him. Ken's brows were knitted. There was definitely something wrong with Stubbs, with the isotopes in general. But puzzled as he might, the solution had not dawned on him as yet. Though something Horty had said the night before in New York should have been sufficient hint to piece the riddle together.

Graham, the supervisor, saw them coming, extricated himself from a knot of quarreling isotopes, hurried toward them. A desperate anguish struggled mightily on his harried features with the respect due the dictator.

But the three men and their followers from the other tanks stopped short suddenly. They had seen!

Up the mountain, not two hundred yards away, a skillfully enfiladed series of trenches bit deep into the soil. The mountain's flanks were broad, and the trenches stretched interminably up and up. A hundred thousand men could lie concealed within those zigzagging slashes.

But it was not that which stopped them dead in their tracks, brought low exclamations to their lips.

ALONG the nearest trench, boldly exposed to the weapons of the super-isotopes, men were parading, carelessly, unconcernedly. Recessives, weaponless, marching back and forth in slow, pacing movement, fronting them with grinning countenance, anxious to be seen, to be observed by every member of the hostile force.

A tank man screamed suddenly, unbelievably. "Look! There *I* am, up there!"

Ken followed his pointing finger. The man was right. His simulacrum, his mirror image, stared down from the trench rim, alike in every lineament, in every trick of gesture. Only the clothes were different.

Graham came up puffing. "That's what's wrong, sir," he reported in panting, hurried tones to Stubbs. "That's why I couldn't attack. The recessives are watching us through powerful telescopes. Every time our gunners man the disintegrators, they expose their dissociated doubles to our view—and the men refuse to fire. Swear they couldn't kill themselves, so to speak."

"Fools!" Stubbs stormed, "all of them. Don't they realize they are doomed otherwise? It's kill or be killed. There is no mercy in the recessives. But surely there must be men in your force who have no counterparts in the rebel ranks."

"There are," Graham admitted hopelessly. "That's how the trouble started. They had no compunctions about destroying the recessives. But the others massed themselves around the disintegrators. There was a fight—a fight among our own men." His voice was ashamed. "More than a score were killed. And all the while the rebels line their trenches, sneering openly at us."

A tank man came forward determin-

edly, saluted. "Commander," he said, "I've just been talking with four of my comrades. They're the only ones without our—uh—other selves up there. Suppose we sneak back to the tanks and turn the rays on those trenches. Before the rest of the army knows what happened, we'll have blasted them out of existence."

"A splendid idea," Stubbs answered warmly. "Go back quietly so that your purpose may not be observed before it is too late."

The man saluted again, and turned to go. As he did so, he took a last look upward; his jaw dropped. A muttered exclamation burst through suddenly clenched teeth.

"What is it, Maxon?" Stubbs demanded sharply.

Maxon stammered something indistinguishable, and started hurriedly off. The scientist stared after him a moment with frowning, puzzled look, then jerked suddenly around as if he had been hit.

Ken whispered: "Good Lord!" to Bill. "We're doomed, all of us now."

Up on the hill, a figure had emerged from the bowels of the earth. He stood there, silhouetted magnificently against the glitter of the slanting sun. Tall, arrogant, angular, a smile of fierce triumph on his thin, straight lips. Malcolm Stubbs, twin isotope to Dictator Malcolm Stubbs; Malcolm Stubbs the primitive personality, freed from the overlaying inhibitions of thousand of years of weary evolution!

They stared at each other for long moments, these two, once fused into a single individual, now separate and apart through the malefic forces of an impersonal science. Moments of tremendous drama, instinct with the fate of a world that hung in a trembling balance.

Even the opposing armies had frozen into rigid stillness, as if they sensed also the terrific struggle that pulled with in-

visible influence between them. Ken saw the solution to his puzzle now, the frightful dilemma that confronted them, saw it now when it was too late.

Too late? Not yet. On the quick, racing feet of Maxon depended more than the outcome of a battle. The doom of a civilization, of the human race, of the planet itself, kept even pace with him. If only——

IX.

STUBBS, the recessive, lifted his arm, spoke: "Brother, your subordinate intends to kill me, the integral part of yourself, who slept with you and ate with you and thought with you. Order him to stop."

The voice was Stubbs', the gesture was indistinguishably his. Malcolm Stubbs started. Great globules of sweat beaded on his high forehead; his bleak features twisted with strange anguish. He whirled, saw Maxon still running, almost at the smooth, gray bulge of the tank.

"Stop!" he shouted. "It is myself you would murder."

But Maxon did not stop. He knew what had happened, knew that it was their only chance. He flung himself desperately forward in a last burst of speed, clawing for the armored door. Once inside——

Ken cried out sharply, plunged headlong for the scientist. Too late! The small weapon kicked in Stubbs' hand. There was a quick, barking sound, and Maxon seemed to stumble. His arms jerked wildly, stiffening fingers slid along the steel of the tank; then he went down in a huddled heap.

Stubbs, the recessive, cried mockingly: "Good work, brothers!" He ripped out an order to his cohorts.

The trenches heaved and spewed out men. Thousands and thousands poured forth in endless flow, guns held cannily behind their backs, steel tips of the bay-

onets gleaming wickedly in the revealing sun, moving down the long slope in slow, steady, unhurried march. Stubbs marched at their head, proudly, arrogantly, his flaming eyes a strange compound of secret hate and licking triumph.

The superisotope trembled violently. Strange yearnings swept his frame, racked him with unquenchable fires. That was *he* coming down the hill; that part of him which had been lost and for which his being cried unceasingly. Up there was completion, fruition, cessation from vain longing.

A moan jerked from stiff lips. The gun dropped from nerveless fingers. Stubbs, Dictator of the Americas, ran up the hill, crying, sobbing, stumbling, arms outstretched toward the man who was himself!

As if it had been a signal, the superisotopes followed their leader, streaming in a solid mass up the rocky ground, faces set in hypnotic strain, calling aloud upon their counterparts.

Ken and Bill stood rooted to the ground, watching with horrified eyes. Never in all the long history of this much-scarred planet had stranger sight been witnessed by human eyes!

Armies of men, or what had once been men, dissociated into component parts, split into sundering personalities, alike in every physical detail, fronting each other, moving closer and closer toward a seeming union.

The dominants streamed in disordered array, eagerly, tempestuously, Stubbs in the van. The recessives, overwhelming in force, moved more slowly, in disciplined ranks, guns discreetly hid, the counterparts in front, those who found no mirror images in the army of the superisotopes unobtrusively in the rear.

They met halfway. Dictator Malcolm Stubbs cried aloud to the other Malcolm Stubbs. He flung his arms wide in eager gesture, hurled himself for-

ward for a quivering embrace. His followers raced clamorously, seeking themselves in the silent, steady rows, seeking for strange union with that which had been torn from them.

The rebel leader smiled. A bleak, frozen smile, like that which Ken had always known, yet queerly unutterably different. His arms twisted forward from behind his back in what seemed an answering gesture of welcome. Ken cried out, ripped from his paralysis. Bill cursed.

THE BAYONET was a sharp, lancing flame in the sun. Deliberately, unhurriedly, it dipped down, jabbed with resistless force. It caught the long, spare figure of the scientist in his stomach. It sank deep with an eager quiver, twisted sharply. Malcolm Stubbs sank with a blubbing scream to the ground, while Malcolm Stubbs set foot on his prone form, jerked out the dripping steel.

It was the signal! From behind thousands of backs came bayoneted rifles, plunged in a frenzy of delirious hate into the unsuspecting, emotion-becclouded superisotopes. The shrieks of the dying mingled in bitter incense with the wild howls of the more than fratricidal recessives.

In minutes the mountain slope was a bloody, frightful shambles. The horde poured upon and over the surprised, semi-armed rout of their counterparts. Bayonets dipped and rose and dipped again with frightful regularity. The supermen had no chance for their lives. Here and there one broke loose from the stupor of the strange longing that had overwhelmed him, fought bravely and desperately for his life. But they were not many. And soon they too went down in the welter of twitching limbs. On and on the slaughter went, ruthless, remorseless, methodical, while Malcolm Stubbs watched with grinning, gluttoned hate.

Bill turned to his friend with an expression of utter horror. "Ken! They'll come for us next. We'd better get out of here."

Ken said despairingly. "They'll catch us. We don't know how to run the tanks."

Bill's brows knit with resolve. He started forward.

"Here! Where are you going?" Ken called after him.

"For those atomic disintegrators," Bill flashed over his shoulder. "At least we can die trying."

"Wait!" Ken cried excitedly. "I've got an idea. They'll see you up there, chop you down before you have a chance. But in the tanks there are others. Maxon was trying to reach them. Come on!"

He whirled and ran, hunched over, trying to make himself as inconspicuous as possible. Bill stopped, raced after him. Behind, the noise grew to tremendous proportions. The shrieks of the dying grew fainter and fainter, overwhelmed in the sadistic howlings of the victors.

Just as Ken's fingers clutched at the entrance door of the nearer tank, a mighty shout told that they had been discovered. A bullet spanged into the metal, flattened harmlessly. Another and another!

But Ken was already inside, dragging his breathless friend after him. The slide shut smoothly in the face of a crashing torrent of steel-jacketed missiles.

"Get to the controls and try to figure out how it runs," Ken said rapidly. "They'll be turning their heavy artillery on us in a minute. I'll do what I can with the disintegrator."

Already, through the view plate, he saw recessives detach themselves from their fellows, go racing back to the trenches. Once there—

Ken flung himself desperately toward the bank of buttons near the tiny funnel

opening. There were many of them, and every second was precious. He stabbed at them, one after the other. Nothing happened. Bill was groaning and cursing as he heaved at unfamiliar controls, trying to get the right combination to start the tank.

The foremost of the recessives had already jumped from sight into the front trench. Round, black muzzles lifted slowly over the top, swiveled to focus on the immobile tank.

Ken's fingers stabbed again and again. Failure stared back at him with mocking roundness; failure and imminent annihilation. The yawning artifices were fixed now. In another second, grim destruction would hurtle straight for them. He punched with vicious despair at an inconspicuous button a trifle to one side.

Then, as the roar of the oncoming shell smote Ken's ears with deafening concussion, something happened in mid-air. The screaming missile blanked out of existence. There was silence, grim, terrible, while Ken clung in fascinated horror to the view plate.

The mountainside had been obliterated. A huge swath sizzled through the earth, seared through the atmosphere. Dead and dying and living and atomic cannon and trenches whiffed into a shimmering dance of hazy, unrelated atoms.

Where there had been thousands on thousands, where the recessives had screamed their song of hate to a world more civilized than they, silence and smoking desolation prevailed. The great experiment was over, obliterated in a welter of primeval lusts and passions.

Ken drew a shaky hand over his eyes. It was hard to believe that that one terrific blast of atomic destruction had slain the last of the one-per-cent personalities, the primitive natures whom Stubbs had released, and who, for one

dreadful day, had seemed to inherit the earth.

Bill jerked at a final lever, cried triumphantly. "I've got the hang of it. Hold on; we're going places!"

The tank swung swiftly around, leveling out rocks and gullies with its endless caterpillars, raced smoothly down the mountain back to civilization, back to a world incredibly freed from the menace that had hung over it for a night and a day.

THE REST is history. Ken Craig knew now exactly what had happened, took the proper measures to eradicate their consequences.

"Nature was agelessly wise in wedding her isotopes together in indis severable compact," he told Bill as they went hurtling over the smoking countryside. "In our scientific arrogance we tampered with forces beyond our knowledge, beyond our control." He shuddered, went on: "That handful of heavier elements, never alone now in nature, hold in their innermost atomic recesses dreadful things. It took the tremendous preponderance of the lighter isotopes to mask their evil qualities, to keep them submerged in the average human being. Perhaps here is the solution of the hitherto insoluble mystery of the nature of good and evil, of their origin in a mingled universe of chance and law.

"Perhaps, even," he speculated, "in the far-off mists when the world was very young, and the internal fires still blazed with incredible fury, the isotopes were not always associated. Perhaps thus we can explain the tenacious race legends, the race memories of a golden age of the pure and innocent and virtuous, and of devils and evil spirits and foul, monstrous things."

It was the vast, common mass of humanity to whom Ken appealed on his return; the normal, average men who had clamored in vain for the dissociat-

ing baths and been refused while their more talented fellows split into component personalities.

They rose in a mighty throng, trembling at the disaster they had barely escaped. They hunted down the scattered remnants of the recessives who had escaped the holocaust on the mountains, killed them on sight. *They* had no mirror images to hold back their arms, to fill them with overpowering longings.

The question of the surviving superisotopes was a much more difficult problem to handle. There were almost ninety thousand in existence, and they held the secret to weapons of incredible efficiency.

But the problem solved itself. The seeds of destruction, of futility, were inherent in them. Horthy had given the first hint when he had gone secretly to the camp of the recessives, seeking the counterpart that had never come to life. It showed more strongly when Stubbs saw Stubbs in the televisor; it grew to overwhelming intensity on that last lethal battlefield.

Time was the catalyst. The strange, inner longing grew fiercer with the passage of the days. The rarer, heavier isotopes were inert, self-sufficient, but the more common, lighter ones seemed unstable, requiring union to achieve quiescent solidity.

The superisotopes forgot their wisdom, their intellectual achievements, the resistless might of their weapons, in the mad desire that now burned with unquenchable fire in their veins. They roamed the countryside with plaintive looks, seeking the beings who had been wrested unnaturally from their wholeness, seeking those who were destroyed irrecoverably.

It was an easy matter for Ken's armed hands to pick them up singly, place them in safe, strong confinement. But he felt a vast pity at the sight of their miserable, wretched existence.

With Bill's aid he evolved a powerful, localized anæsthetic which operated on the intermediate neurone paths, dulled them into surcease from aching longing.

But with it went the vital spark of genius. All the remainder of their lives they moved across the face of normal humanity, listless, tired, wanting in energy and daring. A race of men apart, incomplete, doomed to inevitable extinction.

Ken and Bill were faced with a task of stupendous proportions, now that sudden catastrophe had been averted. The first thing they did was to decree the destruction of every ionic-dispersion tank, every reintegrator. The full process had been known only to Stubbs and Ken Craig. Stubbs was dead, and Ken held the secret close-locked in his bosom.

Then there was the problem of rebuilding the civilization of the Americas. Ken, by unanimous acclaim, was elected administrator. The brains of the nation were dead, or stupefied beyond repair. With the exception of Ken and Bill Maynard, only the anonymous, incoherent masses were left. The leaders were gone.

The two men worked mightily.

Schools were opened by the thousands; teachers, inventors, musicians, authors, scientists, philosophers, were imported wholesale from the rest of the world, lured by flattering offers. Hard-handed mechanics toiled over the calculus, sought to penetrate the theory of what they had practiced all their lives. Jazz players learned the mysteries of counterpoint and harmony; ditch diggers became engineers; storekeepers tried desperately to grapple with the heights of Parnassus. It was tedious and slow, but the work of the nation managed to go on.

"We must wait for the new generation to grow up," Ken told Bill, as the latter groaned over the situation. "Fortunately, talent and genius rise just as readily from the ranks of the average as from the so-called aristocracy of intellect. And we are training them, training them as no new generation had ever been before. Perhaps the whole affair was a blessing in disguise. It focused our attention on certain fundamentals that will not soon be forgotten. It taught us the mysteries of our inner beings, showed us the limits beyond which we must not go."





*"In this case you are merely the chosen material channel
for health. What have you to fear?"*

Laboratory Co-operator-3

by B. L. Bowman

YOU understand the plan for to-night?" Operator 7, otherwise known as Gordon Milton, M. D., asked Operator 8, as the two men were driving through an icy, Jersey wind to the hospital from the railroad station.

"I think so," replied Operator 8, a photographer sent to the hospital by the Mind Research Society, New York City. "As I understand it, a meeting is to take place this evening between you and Coöperator 3's etheric double.

"I'm to shoot all that takes place, including Coöperator 3's etheric double, when she projects it into the laboratory. Operator 12, who will arrive later, will shoot the sound effects and voices. And in Coöperator 3's home in Florida, similar talking pictures will be taken, and both sets will be sent to headquarters to be developed and compared."

"Operator 14 also will be here."

"Yes?"

"He's bringing his thought detector equipped with a loud-speaker which he invented according to Coöperator 3's findings."

"And yours."

"Operator 14 furnished the electrical knowledge to materialize the idea," Gordon continued, after acknowledging with a smile Operator 8's qualifying phrase. "The talkie instrument will record Coöperator 3's and my thoughts as they are transmitted through the new thought detector."

"Well, here we are at the hospital. I'll put you up in my room. I think you'll be comfortable there until five o'clock when the laboratory will be available for you to set up the equipment. By that time, the other operators should be here."

After showing Operator 8 to his room, Gordon made his afternoon visits.

AS HE drove through the late-afternoon, bitter cold, he remembered his first meeting with Coöperator 3. How he had sighed with relief one morning, about a year before, upon receiving from headquarters the telegram which read:

OPERATOR THREE WILL
COOPERATE WITH YOU
NINE A M JANUARY NINTH.

That message marked the beginning of a thrilling year for Gordon.

He now recalled that two days after receiving it the atmosphere of the oper-

ating room had been filled with quiet activity while he thoroughly scrubbed his person to perform a malignant goiter operation.

Upon reflection, he again felt, with all its original agonies, the sudden fear which swept over him as nurse Jensen helped him that morning into fresh operating coat, rubber gloves and mask. That was his first operation of this nature. He felt he could not go on with it, that, with his inexperience in this particular line, he was about to commit murder!

Jensen, while helping him with the thin rubber gloves, cast him a worried glance. And now, he supposed she had noticed the tremor of his long, slender hands.

"Why did I undertake this alone!" he had groaned within himself. The sweat poured out on his forehead. Jensen wiped it off with a sterilized sponge.

Suddenly, Gordon had sensed an added presence in the room, yet no door had opened.

He knew Coöperator 3 had arrived.

His eyes were drawn to the operating table where the patient lay under the effects of the anæsthetic. Small, white carts, on rubber tired wheels and holding shining, sterilized instruments, glittered in the rays from the great, dome light above the operating table. White-clad nurses moved about the room, quietly performing their respective duties.

By the side of the anæsthesian, standing near the patient's head, stood Coöperator 3, a young woman of about Gordon's own age.

Gordon detected a delicate perfume of lavender above the pungent odor of disinfectants filling the room.

So graceful and ethereal was this woman's bearing, that Gordon had felt she should be giving her interpretation of the dance of the virgin forest nymph, instead of assisting him to win his patient's battle against a choking death.

Warmth and rhythm were her keynotes.

And yet, she was so at home in the midst of the cold atmosphere of glittering knives and efficiency that Gordon pondered an instant on life's incongruities.

Then, her large, dark eyes, riveted on Gordon's penetrating, blue ones, revealed life-giving powers.

"In this case, you are merely the chosen material channel for health," they distinctly said. "What have you to fear?"

"Nothing," was the scarcely audible answer which escaped from Gordon's throat. Jensen asked what he had said. Gordon straightened his shoulders. His hands were steady then.

"Nothing," he repeated aloud and walked to the operating table, his eyes buried in those of Coöperator 3.

Gordon now chuckled when he remembered how Jensen had looked at the spot where his eyes seemed glued. He had seen her out of the corner of his eye. Evidently, she saw no stranger nor anything unusual, because she shrugged her shoulders and looked blank. Upon reflection, he supposed he had appeared a bit queer.

Then, he remembered he had spent the evening following the operation in his office at the hospital, making his report to the Mind Research Society.

And that, as he wrote, as a matter of form "The outstanding characteristic of Coöperator 3: Large, vital, dark eyes that talked," he had been sure those same eyes, under personal and favorable conditions, could tell him other things besides that he was merely an impersonal, life-saving device. That they were capable of saying humorous, startling, intimate and wise things all at one time, even if their owner were approximately only twenty-eight years of age.

Upon its completion, Gordon reread the report. It included a minute description of Coöperator 3; her dark-

blue, wool dress clasped at the neck with a large, green velvet bow and belted with green suede, and the center part in her blue-black, waved hair that was drawn into a small, neat knot at the nape of her slender neck.

Even now, a year later, every detail of that first picture of her was indelibly stamped upon his memory.

With some chagrin, he remembered his useless request "Please forward me Coöperator 3's name and address," which he had typed on a fresh sheet of paper and attached to the report.

HE REMEMBERED he had received a letter from headquarters asking him to confirm or deny the report that the silver belt buckle he wore while performing the goiter operation on January ninth were engraved with the initials G. M.

He had confirmed it in a none too docile mood. Now, he wondered at his sudden and unaccountable surge of anger at Operator 1's refusal in that letter to divulge Coöperator 3's name and whereabouts.

Several days later, he awakened in the morning with the feeling that something interesting was to happen, but was too drowsy to remember just what the excitement might be. Then, he remembered another etheric double experiment was to take place that evening. How quickly he had come into possession of his faculties!

"Damn it!" he remembered muttering a few minutes later, when he slashed the skin above his upper lip while shaving. "Now, I suppose she'll report that beauty mark. She sees initials on covered belt buckles!"

That evening, the hospital's great laboratory had been in semidarkness. How vividly he remembered that night! The glass test tubes and bottles of various sizes and shapes stood in orderly rows on their shelves and shone in the reflection of the one powerful light that

illuminated a comparatively small corner of the room. Under this light, Gordon was working on a formula for a serum for the prevention of goiter. So submerged was he in his work that he forgot he was expecting Coöperator 3.

He lighted the Bunsen burner standing at his elbow. With a start, he dropped the lighted match to the floor without extinguishing it.

A woman's arm had passed through the flame!

Gordon steadied himself, blinked his eyes, and stared into the shadows beyond the flame of the burner. Gradually, the form of Coöperator 3 became visible.

"I've been here a long time, Operator 7," her eyes teased. "Sorry to have startled you, but it's high time you remembered our appointment."

"Terribly sorry," murmured the abashed Gordon. "I——"

"Apology accepted."

"Damn it," thought Gordon as he realized he must appear ridiculous to his colleague.

He abruptly checked his thoughts. He knew she had tuned in on his unspoken words. But when he again looked at her, she was attempting to read the notes he had been jotting down on the piece of scrap paper before him. Without comment, he turned the paper so the writing would be right side up to her.

All personal feeling had been lost while she read his notes. The surgeon and the woman possessing eyes that talked became impersonal channels for scientific research for the benefit of the human race. They caught one another's thoughts more accurately than if words had been spoken aloud. They anticipated one another's ideas. They glided down unexplored caves of medical discoveries. The serum compounded that night was astoundingly simple.

IT WAS one-thirty. She was gone. He was spent physically, alone in the

shadowy laboratory. He slumped down on a tall, laboratory stool, rested his arms on the laboratory table and dropped his head upon them. He closed his eyes in physical weariness. Yet his brain was on fire. It wished to go on and on with her over uncharted seas, but his physical body was exhausted completely. Gradually, his conscious mind came back to the material world about him. The man replaced the channel.

"Hereafter, I shall lock myself in the laboratory when I meet her," he had thought, as he drew the bed covers over him in his small hospital bedroom, a few minutes later. "Any one seeing me carry on an animated, silent conversation with atmosphere would think me screwy."

He decided, as he stopped the car for the first red traffic light on the edge of town, that he must have dropped to sleep with a humorous smile playing around his mouth. He remembered no more of that night.

The red light changed to green. As Gordon wove his car through the ever-increasing traffic, he recalled that the following evening he had been on duty for emergencies. He sat at his desk writing reports to headquarters of that morning's operation and of the laboratory session with Coöperator 3 the previous evening.

He was finding it a hard task. He must tell about Coöperator 3's forearm passing through the Bunsen burner flame and inquire if there were marks on her arm. That point must be checked, but for some unknown reason he disliked relating the incident.

He wrote she had worn, that night, a dark-blue, sport dress with elbow-length sleeves.

"Am I intruding?" questioned a wordless voice.

Startled, Gordon looked up. He put his thumb and index finger to his eyes as if to wipe away a mist. The word-

less voice went on: "It's none other than yours truly, Coöperator 3."

Gordon leaped from his chair, his hand outstretched to shake hands, but halted abruptly upon receiving the petition from her lovely eyes: "No, not that! It would be so disappointing to both of us to find I am only atmosphere. Let's preserve the illusion, please."

"Of course," he agreed. "You seemed so real, I forgot myself. Please sit down."

She did.

"I suppose you are wondering why this unannounced call?" she questioned.

"I'm delighted, no matter what the cause."

"Politely said," Coöperator 3 answered brightly. "However, no matter what the reason, this call is unethical."

"There are times when I damn professional ethics."

"I wished to explain something in this morning's operation," she said seriously, ignoring his pleasantry.

"Yes, I wondered why you extended the operating area as much as you did. I could see no infection that far."

"I noticed your instant's hesitation and that is why I'm here. Infection had started, but was still invisible to the naked eye, up to the line I made with the project electric ray. I intensified the ray when you hesitated. We don't want a return of the trouble. A dull-gray aura told the story. I wished you to make a clean job of it and knew you had no way of seeing what was still invisible."

"I followed the ray only because I had confidence in you. I confess, I was disturbed at the time and haven't been able to forget it since."

"I thought so and wished to assure you the infection had spread farther than you had reason to believe. You did a clean job, Operator 7."

"Thanks for relieving my mind. I dislike cutting any more than is necessary. I'm rather a fanatic on that."

Coöperator 3 rose to leave.

"Thanks for coming," Gordon repeated, and then with a twinkle in his eyes, he continued, "But how can you get away from your husband in the evenings unless it's an emergency case?"

"I have no husband!"

"That's ail I wanted to know."

"Clever, aren't you, in getting around regulations against asking personal information of operators?"

"I told you I sometimes damned professional ethics. Are you engaged or anything?"

"No. How about you?"

"Free, white and twenty-one," he answered.

"No more personal questions! And if you have no more professional ones to ask, I'll be going. And I won't weaken again."

"Weaken?" he teased.

"Yes, weaken." She smiled. "You know as well as I do that all that takes place between us is supposed to be reported by us separately to headquarters. Some of our conversation to-night would be a great aid to science! Good night, Operator 7," and she started for the door.

Automatically, Gordon rose to escort her out as he would any visitor, but she was gone as suddenly as she had appeared. How shocked and lost he had felt at that magic disappearance!

He sank back into his chair. Had she been in the room with him; he wondered, or had he imagined she had? Even now, a year later, her visit seemed like the memory of a delightful dream. The faint lavender perfume, which was a part of her, lingered in his consciousness.

A few days later, Gordon had learned from headquarters that Coöperator 3 had reported a slight, razor cut above his upper lip the evening they had compounded the antigoiter serum; and that a small red spot having the appearance and sensation of a burn was found, the

following morning, on her left arm above the wrist.

"She's a wow of an operator!" Gordon thought, as he slapped on his brakes upon entering the hospital garage. He had no more time for reminiscence. He had just time enough to eat and dress before the long-anticipated experiment of this evening was to take place, in which all operators of the society were interested so keenly.

"ALL SET?" Gordon inquired upon entering the laboratory. The guest operators were making sure all was in readiness.

"Everything's ready," Operator 8 replied.

"Cigarette?" asked Gordon. "Somehow, I can't hand a thing to being in the movies!"

"You look calm enough," commented Operator 8. "As for the cigarette, no thanks. Please go outside to smoke. This photographing of etheric doubles is a ticklish enough business without smoke in the room."

"I don't need a smoke anyway," Gordon said, as he tossed the unlighted cigarette into a near-by wastebasket with one hand and ran the fingers of the other through his prematurely graying hair. "It's three minutes of eight, shall we start?"

"O. K."

The three guest operators took their places and opened the machines. Gordon walked to the laboratory table. The room was charged with suspense.

"Oh, if this only works!" Gordon thought.

He was startled to hear his thought voiced by the thought detector on the other side of the room.

Silence laden the room. Gradually, a shadowy figure projected in. Coöperator 3 was moving toward Gordon. Her visiting operators, operating their various machines, could be distinguished in the background of her own living room.

AST-6

"How stunning the blue dinner gown!" Gordon thought. Again, the detector exposed his thought, and he decided to trick the blasted thing and think no more private thoughts for the present. The decision was voiced ruthlessly.

"What is taking her attention?" Gordon wondered. The question was voiced by the detector.

"You have projected a dog as well as yourself!" he exclaimed aloud, as the form of a pure-white, police dog became visible. "What a feat! What nerve!"

She paid him no heed. She was coaxing the nervous, prancing animal into quietness.

"There, Fritz, beautiful dog," she soothingly murmured aloud by means of the thought detector. "Be good just a minute while we have our pictures taken. There now, walk over to the laboratory table. You don't see the table? Well, never mind, beautiful. Steady, beautiful, steady, just a few moments more. There now, that's a good boy."

Fritz quieted. He stood at attention with upright ears, tail out, looking his mistress straight in the eyes. For a full half minute, her eyes hypnotized the animal so that he did not move.

Then, his huge tail drooped between his legs. A wild look came into his eyes. He gave one bound out of the room and let out a terrified yelp.

Coöperator 3 faded out. The thought detector was silent.

The hospital laboratory was left in shocked stillness. Gordon and Operator 14 stood stalk still, as if frozen. Horror was written on their faces.

"Something's gone wrong!" exclaimed Operator 14, the detector inventor.

The sound-and-movie operators cranked on and on, letting nothing in the laboratory escape the eyes and ears of the cameras. They shot Operator 14 and Gordon, whose perplexed gasps and

frozen faces registered disappointment and consternation.

"The shock may have unbalanced her," groaned Gordon. "Oh, Lord! Why did she try to bring that dog?"

"But look what it has done for science!" exclaimed Operator 14, the purport of the accomplishment dawning upon him.

"She's too fine an operator to have this happen!" Gordon groaned.

The cameras stopped. Operator 8 crossed the room and offered a cigarette to Gordon, who took it with trembling fingers and sank down on a high stool near him. Brown smoke streamed from his twitching nostrils. The sudden collapse of the projection had shocked his own nerves.

In a silence heavy with disappointment and conjectures, the men packed the records and machines, making ready to leave on the midnight train.

After they had gone, Gordon sought release from his worries in an attempt to sleep. No sleep relieved his agony. At two o'clock in the morning, he sent a telegram to headquarters in New York requesting an investigation of Coöperator 3.

Two days passed, and Gordon received no word from headquarters.

In the early evening of the second day, he went into the laboratory, hoping Coöperator 3 would project herself there and let him know all was well with her and that their work could continue as in the past.

He fumbled with this bottle and that test tube. Nothing happened. On a superstitious sentiment, he lighted the Bunsen burner. No arm passed through its flame. He smoked one cigarette after the other, decided she was not coming and went to visit a patient in the hospital.

"A message for you, Dr. Milton," said nurse Jensen, as Gordon emerged from the sick room.

"Thanks," he mumbled as he fairly

snatched at the yellow envelope. Jensen started down the corridor.

"Jensen?" Gordon called. "Please call the airport and ask the time the next plane leaves for Tampa, Florida. Check connections and make reservations for me. Ask Dr. Turner to meet me in my office as soon as possible."

"Are you leaving, doctor?"

"Yes, emergency case." And he strode down the corridor.

"STEWARDESS," Gordon asked, after being in the air a few minutes.

"Yes, sir?" inquired the young woman in uniform who stepped to his side.

"Why don't we make some headway? We're just crawling along."

"This must be your first trip up, sir. We're making a hundred and fifty miles an hour."

"Hundred and fifty?"

"Yes, sir." Since Gordon relaxed and seemed indisposed toward further conversation, she asked: "Anything else?"

"No, thanks."

Gordon retreated within himself.

He remembered the thought detector with its privacy-intruding loud-speaker. He smiled to himself and was glad the pesky thing was not on board the ship. The other passengers would have an amusing trip, if it were tuned in on him that night. Upon reflection, he was not sure it had been a good thing to help devise the odious thing. Man had a right to some privacy.

Then, his thoughts returned to the test of two nights ago. He supposed it had been a failure. Nothing planned had taken place. Why had Phyllis—he liked the sound of the name he had learned from the telegram—projected that dog?

She should have known the nervous system of a dog could not stand the strain of such concentrated vibrations, and that a sudden break in her thoughts

during projection might prove too great a shock for her own nerves to withstand. He admired her courage, but not her judgment. And wasn't it just like a woman to take things in her own hands at a crucial moment, regardless of consequences!

And now, he thought, the experiment would have to be remade. And before it could be remade, this time he hoped in an orderly fashion, Coöperator 3 would have to be made well. He wished the trip were over so he could go about the business of restoring her to health.

He noticed that ice completely covered the plane's windshield.

"We must be flying blind," he thought, "and it must be terribly cold outside." He snuggled into his seat more deeply, thankful for the warmth inside.

Suppose Phyllis had become unbalanced with the nerve strain of frequent projections, and this final shock had broken her! His trained mind rejected the possibility. Constructive thoughts were this medical man's creed.

"Will we be on time?" Gordon questioned the stewardess, as she served him coffee at five o'clock in the morning.

"Yes, sir."

"Only two hours more," he thought as he asked. "Do you know how far it is from the Tampa airport to Davis Islands?"

"We land at the new airport on the islands."

"How large are the islands?"

"From the airport to anywhere on the island is no more than a ten minute ride."

"Thank you," Gordon said and the stewardess moved on to serve the next passenger.

GORDON stepped into Tampa's dime cab upon alighting from the plane.

During the six minute ride to his patient's home, even the thought of his mission was usurped by the glories of

a Florida early morning. The singing of the birds could be heard above the motor's hum. The blooming hibiscus, oleander, Brazilian pepper and other semitropical bushes lent an atmosphere of fairyland to the brightly colored homes of Spanish architecture lining both sides of expansive Davis Boulevard.

"The sky is so blue!" thought Gordon, as he glimpsed a portion of Hillsboro Bay when the cab rounded a corner: he marveled at the blueness of the water and the grace of the ducks resting in it after their long flight from colder climates.

All the beauties of nature were forgotten. Dr. Milton was pressing the doorbell of the green stucco Spanish bungalow in which Coöperator 3 lived.

"Dr. Milton, I presume?" inquired the friendly voice, belonging to the young man who answered Gordon's ring.

"Yes."

"Come in, please," the young man said, while opening the screen door.

The younger man proffered his hand and volunteered: "Dan Farrington's my name, Phyllis' brother."

Gordon set down his traveling bag in order to shake hands with Dan.

"Let me have your coat. It looks like a mighty heavy one for this part of the country."

"And feels more like one," Gordon answered politely, even though he realized that neither he nor the man before him, at that moment, cared a mite about the weight of his overcoat. "It's regular summer here. It's hard to realize there's ice and snow up in my part of the country. Now, tell me about Phyllis—Miss Farrington."

"There isn't much to tell," young Farrington began. "Some men came down from New York to perform some sort of experiment. Fritz, here, took some part in it."

Gordon looked at the growling, huge,

white, police dog standing beside Dan and recognized him to be the one Phyllis had projected three night ago.

"The dog became frightened," Dan continued, "and ran out of the room with a yelp. Phyllis lost consciousness and fell to the floor.

"The operators, as Phyllis calls them, warned her not to use the dog, but, just like her, she said she was willing to take the chance. Phyllis revels in the unusual. She always does the unexpected!

"She didn't come to for sixteen hours, despite medical help. Since then, every time she has regained consciousness, she has asked for you, thinking you would understand her case better than the local physicians. Meanwhile, a telegram, which dad opened, came to Phyllis from headquarters asking if there had been trouble with the experiment. And, through the sender of this message, we located you."

"Any fever?"

"Hovers between a hundred and two and a hundred and three and a half. Doctor can't get it down." Then he added, "You'll find her in the first bedroom to the left of that long hall. The family isn't up yet. The nurse is about somewhere. If you'll excuse me, I'll give Fritz his morning's run."

No one was about.

Gordon walked down the hallway Dan had designated, quietly opened the door of Phyllis' room and closed it behind him.

THERE on the bed lay the real Phyllis. Her worried, flushed, yet too white face instantly caught Gordon's professional eye. Her blue-black hair shone in the sunlight coming through the tilted Venetian blinds and made a sharp contrast on the rumped, white pillow.

She was vital even in her illness.

She was so like the phantom Coöperator 3 that it was difficult for Gordon

to believe he was occupying the same room with her.

He was aware of the familiar, faint scent of lavender pervading the room.

Conflicting emotions suddenly surged up and warred within him: Simultaneously, he longed to crush her to him and to soothe her as he would a tired child. Why, he had been in love with her for a long, long time.

First of all, he was a physician, so he leaned against the door for support in a struggle for composure. This sudden awakening was staggering. He was all choked up. Yet, an onlooker would have seen only a poised, tall, definitely professional, youngish man with prematurely graying hair, whose blue eyes and slightly quivering nostrils told the story of his love for the sleeping woman lying on the bed.

Phyllis' deep, dark eyes opened and peeped over the lavender and yellow, handmade, patchwork quilt spread over her.

"I won!" They sighed and closed again.

Speechless, Gordon strode across the room and seated himself on the side of the bed. His arms gently stole around her fevered shoulders. What a fool he'd been not to know before! And she felt the same way!

Time and space were no more.

Presently, a woman cleared her throat in the background.

Gordon looked around, but Phyllis made no move. She was in a fevered sleep.

Gordon stood up. A starched nurse was in the room.

"Sorry," she said.

"I'm Dr. Milton," Gordon managed to explain.

"We were expecting you, doctor. I heard you come in an hour ago. Mr. and Mrs. Farrington are having breakfast and have asked you to join them."

"I'd rather not. I'll stay here a while

longer." He was still too unnerved to wish to meet strangers.

Gordon sat down in the low, slipper chair standing beside the bed. He took Phyllis' hand in his. For another hour, he sat looking steadfastly at her. Her fever dropped to normal. The pulse Gordon held in his hand also became normal. The fretted look that had haunted him upon his arrival gradually disappeared from her face. Her expression was one of triumph.

"DARLING, the test was a success!" stated Gordon, with as much calm as he could muster when he walked into Phyllis' room, that afternoon, holding a telegram in his hand. "Both sets of records and pictures dovetailed exactly!"

"Then, I didn't spoil everything?"

"On the contrary," he said as he sat on the edge of the bed, "you have proved to the skeptics that human mind power can project instantaneously one's etheric double, and even that of a dumb animal not in harmony with the idea, to a given point a thousand miles distant.

"Since that is possible, just imagine the further possibilities there are! Face-to-face conferences can be held with the participants remaining in their own cities in different parts of the country, providing each group involved had access to one capable operator at the time of the meeting. Thus, to one more degree, overcoming time and space.

"Then, the thought detector proves to the laymen that thoughts reach the person and place to which they are sent and are established in their aura. And, therefore, are bound to penetrate the person's consciousness in a quiet, unpreoccupied moment."

"Gordon, I did it on purpose," Phyllis confessed.

"I don't get you."

"Stupid dear, I projected Fritz on a gamble that it would bring you to me. I knew what probably would happen."

"You mean you wanted me that much? But suppose it had wrecked your reason!" Gordon shuddered at the thought.

"But it didn't—and I won."

Gordon leaned down and kissed her.

The local nerve specialist in attendance found them in this position when he entered the room without knocking. He was followed by the nurse and the dog, Fritz. The latter had been waiting in the hall for hours with the hope that some one carelessly would leave a crack in the door or fail to say: "Go back, Fritz," upon entering his mistress's room.

"Dr. Andrew, Dr. Milton," said Phyllis.

"Dr. Milton," announced the elder physician after giving his patient one all-seeing glance, "I turn this case over to you. I've struggled unsuccessfully for days to help Miss Farrington, and look what you've done for her in a few hours. The case is yours." There was a twinkle in his old, wise eyes when he asked, "What course of treatment do you propose?"

"I suggest a quiet wedding a week from to-day," Gordon answered, joining into the elder man's mood.

"To you, I suppose?" interrupted Dr. Andrew.

"Certainly. Then, a quiet cruise to South America and back here, topped off with an airplane flight to the cold, Jersey coast, to establish residence there. And no more research work for her for one year."

"Best treatment I know for brain-and-nerve fatigue. That is, if the patient is willing."

"It sounds heavenly to me." Phyllis beamed.

BLUE MAGIC *Part 3*



*Continuing a great
serial novel*

by

**CHARLES
WILLARD
DIFFIN**

UP TO NOW:

To Rance Driggs, forestry man, magic seems to have descended on Black Mountain. But Driggs is a man trained in science as well as forestry, and to him magic is just something not yet understood.

But bare footprints, then the marks of hideous three-toed feet on Black Mountain and a blue star falling, stopping, then moving swiftly from sight,



Fozan clung to the animal's back, as the big jaw gripped the first of the guards and another went down beneath trampling feet.

make him wonder. And Katharine—"Kitten"—Putnam sees a figure of blotchy green among the trees.

Driggs finds a nearly naked, bronze-skinned man on the trail just as a rattlesnake has struck him. Driggs saves him, but is knocked unconscious by a green-fleshed man with a ray of light.

Katharine revives him, and finds, among marks of ugly, three-toed feet, a locket with a blue jewel. Driggs,

looking into it, sees a beautiful woman and seems to hear her say: "Who holds the blue jewel of Dra Vonga must come when Dra Vonga calls."

Then, Tabletop Mountain vanishes in a whirl of invisibility, and the same mysterious quivering veils Driggs' clearing for an instant, but in that instant his home is destroyed, and again are found marks of the same hideous feet.

But now Katharine has taken the

jewel, and Driggs learns that she is being drawn in a hypnotic trance to Table-top. He goes there only to see her vanish in the zone of invisibility, and plunges in himself. Inside the zone is a huge ship from which pours a horde of green-fleshed man-things.

Driggs and Katharine are captured and taken to Xandros, a satellite of Jupiter, known as Grokara. There Dra Vonga, attracted to Driggs, causes Katharine to disappear in that same whirl of invisibility, but Driggs secures a promise that the girl's life will be spared.

Fozan, a native of Xandros and the one whom Driggs saved on Black Mountain Trail, takes Driggs to see "Du-vor, the one who flies." Driggs finds Duvaaurier, a Frenchman with one withered arm, who has journeyed to Xandros in a space ship of his own inventing.

He has been a captive of Dra Vonga for over a hundred Earth years of time, yet it appears that only a year has actually elapsed. He tells Driggs that Dra Vonga is master of time, and that on Xandros time runs fast, although it seems to pass at normal speed.

Duvaaurier is building a fleet of space ships for Dra Vonga, who has told Driggs that together they will rule the Earth. She has new weapons and new transports, and her secret of invisibility through control of time makes the menace very real.

Duvaaurier's withered arm is the result of punishment in the cold flames in a hidden room beneath Dra Vonga's temple where great machines are at work, and Driggs, at mention of that room, knows that that is where Katharine Putnam is held prisoner.

And, though Duvaaurier begs him not to, Driggs leaves to go to the girl's aid. His giant, green-fleshed guard follows him closely as he goes.

XII.

THE SHIPS and the throngs of workers were behind him, but Driggs did not head directly for the distant dome. He bore off, instead, to one side.

Close on his trail, so close that he heard the giant's coughing breath at every step, came the green guard; and, from above, an unmoving sun, lighting an endless day, shone down on the ugly, green figure whose muscles bunched and pulled and grew long again, in plain sight beneath his transparent skin.

Where the forest began, the green wall was in endless motion. Leaves opened and closed or jerked back as living vines writhed and sent their blunt, sightless heads probing about.

Giant flowers were crimson chalices filled with fragrant liquids; and a vine, finding one of these open, thrust its head in as Driggs watched. The crimson blossom struggled in vain. Driggs could even hear the sucking sound as opened pores in the head drew in the fluid. The bloom faded to pale-pink and wilted down, then the vine withdrew its head and again took up its endless search.

Driggs had to force himself to lay hands on one of the things, and yet a half-formed plan made this essential. He caught a vine that was looped across his path and drew it aside. The thing twisted within his hand and strove to get free. It was pulling upward, and it almost lifted him from his feet before he let go. Then the vine lashed fifty feet in the air, and Driggs watched it go with thoughtful eyes. After that he passed through the living wall of green and into the forest.

There was no path, and the tree trunks, like polished ebony, were crowded close. For a few steps, the green giant was at Driggs' heels. Then he could go no farther. From his lips came strange barking sounds, and he

whipped a white metal tube from the cloth at his waist. He aimed this at Driggs, then pointed back toward the forest's edge.

Driggs looked at him coldly, but said, "Maybe you're right about that," and turned and retraced his steps.

The green guard stood still and fumbled with the folds of cloth while he put the weapon away. Driggs walked fast.

He was almost out of the forest when a blunt, searching head crossed before him—another vine, like a writhing serpent was seeking food. This one was black, with red veins running lengthwise. Driggs caught it back of the head and drew it after him as he hurried on.

It writhed in his clutching fingers and pulled backward toward the trees. He felt the throb of sentient life in the thing as he tugged forward on it. The green giant was hurrying to catch up, and suddenly Driggs opened his hand. The vine shot back, and Driggs followed it with almost the same speed.

The green guard dodged, but the heavy, rounded head of the vine was swinging full at his face. He jerked his bare, pointed head down and sideways and threw up both hands to ward off the blow. Here was the moment Driggs had planned for. He leaped in.

He landed close to the green figure. The pointed head was drawn down and bent to one side. It was within reach. Driggs took only an instant to set himself, then sent a crashing right flush to the green jaw.

The big green body dropped almost soundlessly to the soft earth and lay still. And in equal silence but with breathless haste Driggs fumbled in the folds of the man's waistcloth until his hands found the metal tube. He pulled it out. Then he stood up and looked at it.

The bulb on the end of the tube was made for a bigger hand than his, but he could hold it and reach a lever on

the side. He aimed the tube at the green head on the ground before him and pressed the lever for an instant.

Light made a thin line; then Driggs released the trigger and dropped the tube into his pocket. After that, he pushed out almost into the open, and turned and ran.

He skirted the field, keeping always in the shelter of the outer foliage. He stopped at times when he came to pathways through the forest where men of Fozan's race passed bearing materials for the ships. Then he crossed the pathways unobserved and went on until he struck through the forest toward that distant opalescent dome.

THERE WAS no sign of life on the broad plaza surrounding the outer of the three circular buildings. He did not try to go back through the passage that Fozan's father had used, for he had seen guards near the exit when they passed out. Instead, he ran silently across the plaza and stood before the big doors where he and Katharine had stood before. They swung inward at the first touch of his shadow.

Here was a place of horror that needed no guard—Driggs knew well enough what this meant. He paused for only an instant, then passed inside and saw the big doors swing shut.

All was darkness in the big circular tunnel, and no light formed this time to lead the way. Which meant that the other time their approach had been guided by Dra Vonga. She had operated mechanism to create that light; she had sent her laughter rippling over an invisible beam. But now Driggs ran blunderingly through the dark.

The cross passageways gleamed with purple light—the tunnels through the water were as they had been before. Driggs was in the last circular coil when he saw the beginning of light in the coil itself.

It came in the windings about the

big tube. It was a yellow glowing that changed to a pale-green. And, with the first coming of the green light, the air in the tunnel shot forward with tornado force.

It sent Driggs sprawling to the floor. He rolled over and over, then his body turned lengthwise of the tube and slid at frightful speed as the pull of the solenoid and the hurricane of wind swept him on.

At last he crashed against a solid wall and lay battered and breathless, looking above him at a vent out of which the air rushed. But at one side was the purple passage to the inner shrine—the temple of Dra Vonga.

He dragged himself toward the passage while the wind battered against him and held him almost immovable against the end wall. But, at last, he fell into the cool, purple light, and ahead of him was not darkness as had been the case before, but the soft opalescent glowing of the dome above the throne room of the ruler of the Xandrian globe.

It was a matter of minutes only until he stood on the platform where Katharine had been. He counted the archways, then ran swiftly but soundlessly to the third arch.

Darkness lay beyond, and out of the darkness came sounds: the soft whirl of generators turning at high speed; a recurrent sighing, and a shrill tremulousness above the range of sound that caught Driggs' nerves and set them vibrating in sympathy; and other sounds less easily identified. The torture of that soundless quiver was beyond bearing.

But down there somewhere Duvaurier had seen machines and had felt cold, torturing flames. The green light in the tunnel meant that the big coils were in operation. And now, in that place of abomination, Katharine Putnam was a captive.

He knew it, suddenly, with sure cer-

tainty, and he flung himself forward into the dark. For three strides he felt the floor beneath him, then that ended. He pitched forward; then blue light streamed upward from below and played upon him as he fell.

XIII.

THE LIGHT was like a fountain of water. It buoyed him up; the solid thrust of it came up from beneath and held him. But, after a moment, the fountain sank and lowered him gently to the hard surface of a floor.

The fountain of light, splashing about him, had cut off his view. He had seen nothing. Now all that was gone, and he scrambled to his feet and turned right, then left, trying to see everywhere at once.

He was in a room—a place filled with machinery. Twenty feet above him the ceiling reflected a ghastly green light. The light came from some distant source, but it flooded across under that ceiling and poured down upon the polished metal and glass of great machines and set them to glittering.

Dynamos whirled and made steady green lines of light. Strange devices with big gleaming balls of metal above them reflected from a thousand curves, and here and there great quartz tubes held light of their own—wavering, violet light that played incessantly.

Yet all this meant nothing. Driggs was looking for the girl and nothing else mattered.

He ran one hand into his pocket and gripped the bulb end of his weapon. He did not even know what the weapon was, but it was a ray projector of some sort, and he knew how that ray had torn at his brain. He pulled the weapon from his pocket and held it in his hand, then stepped silently forward.

Sound had filled the room, as well as light. That humming whirl that he had heard before came from the dy-

namos, and off at the right a purple light imprisoned in a spiral of glass grew from a mere pin point to a big glowing mass, then died away and sighed with an almost human breath each time that it waned. And over all was a sound Driggs could not identify—a weird, ghostly singing like night wind in the shrouds of a ship—a wind that blew without ceasing.

But these were noises only of the machines, and his ears were straining to hear other sounds—voices—Katharine Putnam's voice. Yet it seemed he was alone, until, *pat-patting* through these other noises, was the sound of bare feet running on stone.

From among the machines something darted forward and stopped by the spiral of glass. And the green light came down from above and threw its ghastly glow over what seemed the living mummy of a man.

This was something that lived, yet had no right to be among the living; something—Driggs knew this suddenly—whose whole body had been blasted as Duvaurier's hand had been.

The man stood in front of the purple light and watched it as it grew and faded and gradually grew again. He swung his withered, shriveled body from side to side, in time with the light, and his skin creased stiffly like old, brown parchment.

Abruptly, his swaying motion ended, and he threw himself upon the floor, then rolled over and over, shrieking with laughter. Driggs got one look at his shrunken face and knew the man's reason was gone.

The laughter ceased abruptly as the sunken eyes stared at Driggs. Then, with a wild flinging of arms and legs, the brown, naked thing came to its feet and darted back among the machines while his voice rose in a shrill scream of fear.

He ran toward the source of the green light, and his screams stopped,

not far away. Then other sounds came. A woman spoke sharply, and a deeper voice barked sounds such as the green men used.

THE FIRST VOICE was not Katharine Putnam's. It might have been Dra Vonga's—Driggs could not be sure. But the sounds were near. He slipped his weapon beneath his khaki coat, but kept his hands on the firing lever. Then he ran where the withered man had gone.

A battery of cylinders with funnel-shaped tops reached away in a curved line. Above each was a black disk in the ceiling, and Driggs knew, even while he was straining to throw himself forward, that here were the generators of the blue flames he had seen in the temple room above.

The cylinders blocked off the view of what lay beyond, but light, ghastly green, came from something back there, and a barking shout sounded loud. Then, suddenly, a girl's voice cried out. It was Katharine Putnam, and the sound checked Driggs for one instant.

"No," she said, "I will never consent."

Driggs did not mean to call out. He meant to rush in silently, but one cry was wrung from him. "Kitten!" he called, and heard her reply.

"Rance!" a piercing cry. And again: "Rance!"

Then Driggs ran swiftly past the battery of gleaming machines—on, to where a green flame blazed.

The green light blinded him only for an instant, then he saw figures. Dra Vonga, standing—and the green light swallowed her skin and made her dark eyes look haggard, draining even Dra Vonga of her beauty. She was wearing a robe of some soft, dark material that hung in graceful folds.

Beside her was a pedestal that ended in a flat top. A metal arm arched above

and held a single brilliant point of white light above the pedestal top.

Arkos stood near, and he took one step toward Driggs before Dra Vonga said, "No!" and stopped him.

The withered man was crouched on the floor at Dra Vonga's feet.

But Driggs was darting wild glances about. He called once, "Kitten!" then he saw her, locked in a whirl of flame.

Green flames! Here was the source of light that flooded the room. But, no; they were blue; but they whirled around a central core of yellow light that projected above the blue and reached in a round bar of yellow to the ceiling.

Singing flames! For the weird, wailing song he had heard came from them.

The blue flames whirled at blinding speed and sang as they whirled until they fused together and made a cylinder of light, and the yellow inner core merged with it in green, spectral glowing. A blue, whirling wall; and inside the blue flame, in the golden central core, Katharine Putnam was standing.

She was looking directly at him, staring through the whirl of flame, and the glow of it merged with the red of her dress to make it seem black and leave her face whiter by contrast. She said nothing, but looked at Driggs from wide, horror-filled eyes, until he moved toward her. Then she called out: "Don't!" she cried. "Don't touch it, Rance! The flame——"

She stopped, and again stood staring. The cylinder—Driggs knew it now for the first time—was shrinking, drawing in closer and closer to the slender figure inside.

As if from some terrible distance he heard Dra Vonga laughing—soft, throaty laughter. Then she was speaking.

"See, Rance Driggs, this little brown man beside me. Once—he was tall and fair, but the blue flame struck him and

made him so. Soon this Kitten will no longer attract you."

DRIGGS turned and whipped the white weapon from beneath his coat. It glinted with deadly menace under the green light. He aimed it first at Dra Vonga, then at Arkos, then swung it back again.

"Turn it off," he said. "Quick! Quick, I say!"

Dra Vonga was not ten feet away; Arkos was a little nearer because of that one move he had made. They stood perfectly still, and something in Driggs' cold eyes checked even the trembling of the brown, withered thing at Dra Vonga's feet.

Dra Vonga spoke first. She said, "You dare to threaten me?" And after that she made sounds such as the green ones used, and the sounds sent Arkos forward in one giant leap.

Driggs caught him in mid-air with his weapon, then sprang aside to let the big green body crash to the floor. Arkos lay still.

Driggs swung the weapon again on Dra Vonga. He said, "I'm learning some of your tricks. You haven't got me on the black spot now. You can't slow me up. Turn it off, I say! I'll count three."

Dra Vonga laughed then, easily, confidently. She reached out with one hand, and brought it under the little point of white light so that the shadow of her hand fell on the plate beneath. The deadly menace of the green light persisted, but the song of the flames changed to a lower, droning note.

From back of him, Katharine Putnam's voice said, "It's moved away from me, Rance. The circle is bigger. Now it's holding still."

Dra Vonga let her hand fall to her side. "No one but Dra Vonga," she said, "knows the secret of this. Only Dra Vonga's hand can change the flame."

Again she laughed softly as she looked at Driggs. "Destroy Dra Vonga," she said, "and Kitten is still locked in the light. But it is only light, Rance Driggs—light, and a few other radiations that my brilliant father, Dra Tor, discovered. Kitten has only to step through the light to be at your side, but when she has done that she will be like this little withered one here."

She bent down, and her hand, so gracefully formed, rested for a moment on the horrible, parchmentlike skin of the mummied man. And Driggs, looking at him, remembered Duvaunier's withered arm, which had also felt the touch of the blue flame. Kitten would be like that!

His hand, with the little white metal ray projector, dropped to his side. He said bitterly, "The word of Dra Vonga then——"

"—is the word of Dra Vonga," she said. "For see: the blue flames do not kill, which is what Dra Vonga agreed."

There was a childlike complacency that was baffling: an artless child; an alluring, seductive woman; a fiend in that same beautiful body—Dra Vonga seemed all three.

On the floor at Driggs' side the big green-fleshed figure of Arkos jerked spasmodically. The bulb of a ray projector showed in the folds of his loin cloth. Driggs bent and reached for it, then saw blue metal beside it. When he straightened he had Arkos' weapon, but he had also his own .45.

And, though he knew it was foolish, the feel of it in his hand gave him new courage.

HE snapped it open with a jerk of the wrist, throwing the cylinder out sideways. There were three dented shells. The hammer had fallen on these back on Tabletop. But there were two cartridges left. He pushed the cylinder back carefully and turned it to bring

one of the cartridges under the hammer on the first pull.

Arkos on the floor was looking up at him from narrow, slanting eyes. Driggs motioned with his gun. "Get up," he said. "Get over there beside her."

And a moment later he told Dra Vonga, "All right, you didn't kill her; you kept your word. And this little ray gun doesn't kill either. But here's one that does."

He swung the muzzle of the .45 from Dra Vonga to Arkos and back. "When this kills them," he said, "they stay killed."

Faced with new magic, Dra Vonga flinched. Her eyes grew big and she raised one hand between her and the blued steel. She cried out: "No, no, not the thunder death! Dra Vonga will not harm Kitten. It is a promise. It is the word of Dra Vonga."

Driggs said, "Turn it off," and moved the gun a fraction of an inch higher.

Dra Vonga's slim hand flashed out again beneath the little point of light, so close that it shadowed the whole pedestal top.

Driggs half turned. He was watching Dra Vonga, yet he could see the whirl of flame. He was watching it as the blue flame vanished.

Only the yellow glow at the center remained and made a column of light from floor to ceiling; and from the heart of it Katharine Putnam stepped out and walked unsteadily to his side and stood, swaying, for a moment.

Driggs took his gun quickly in his left hand and put his right arm about her to steady her.

Dra Vonga was looking at Katharine, and a little puzzled frown creased her forehead. She said slowly: "The woman of Earth is not as beautiful as Dra Vonga. I do not understand." But she seemed speaking to no one in particular.

From the floor at her feet the with-

ered thing that once had been a man got to his feet and stood crouching, then ran to hiding beyond the glittering machines.

Arkos made guttural, growling sounds, but Dra Vonga silenced him with one curt word in his own tongue. She brought her hand again beneath the little point of light and moved it, and over where the yellow columns still stood blue flames again took up their whirl, and the room was filled once more with a spectral glow.

Then the yellow light blinked out, and only the clear blue remained. The blue flames sang in a quavering, high-pitched note that climbed up and up until it was above the range of sound and was only a shrill tremulousness that rasped Driggs' nerves.

His arm tightened around the girl. Then he backed slowly away. He held the gun steadily on Dra Vonga and Arkos. He half expected an attack from some new source, but none came.

Dra Vonga stood silent and unmoving. The expression on her face as they went was entirely inscrutable.

THE FOUNTAIN of light that had lowered Driggs into the room buoyed them up, although now the fountain could not be seen. Only the blue light from farther back in the room flooded along the ceiling and dimly illuminated the upper passage that led to the big room.

The fountain was holding them steadily at the upper level and a metal grip in the wall was within reach. Driggs drew the girl and himself out into the passageway.

Darkness surrounded them, but he knew the way and he held her and took her with him as fast as he dared go.

He felt the wood of the platform beneath his feet and heard his boots treading on it hollowly, but still he was in utter darkness. He gripped his gun and listened, but there was no sound.

Staring into the blackness, he whispered: "Another cute little trick! But come on, I can find the way. We'll go straight out—take a chance on the guards—get outside."

He was feeling his way across the empty, echoing room, and he struck the arch at the exit squarely. Here was where Fozan's father had led him. Driggs felt his way quickly out into the passage.

This passage should have been short. There should have been three of them, alternated with bridges. But instead, Driggs, with Katharine clinging to his hand, groped on and on through darkness until his reaching hand touched a last archway and found no wall beyond.

He extended one foot and knew that steps were ahead—steps leading down. And suddenly he understood. Then he gripped the girl's hand and pulled her close to him while he swung his gun right and left in the darkness.

In a breathless whisper, Katharine asked, "Is it night, Rance?"

Driggs' lips were stiff, and he spoke with difficulty.

"It's broad daylight," he said, and his voice shook. "The plaza's out there, right ahead of us. I can feel the sun on my face. We're blind, Kitten—blinded by that damned light!"

Then, coming out of the darkness—from the passage behind them and from the steps ahead—was the soft scuffling of bare feet on stone. And somewhere Dra Vonga laughed.

XIV.

HE STOOD ALONE and utterly helpless only a few minutes later. Katharine was gone, torn from his arms. Only a piece of cloth remained in his clutching hands. His gun was gone too—one numbing blow on his arm had done that.

He had been helpless. Once he had

sprung toward the sound of a barking voice, but his hand found nothing and his feet went out from under him. He had pitched forward, rolling down three of the steps before he stopped.

Now he was standing erect, listening, but there was no sound. His eyes were wide open, and he felt the sunlight, warm on his face, but he was staring into black darkness.

He went down from step to step feeling his way, and moved out across the broad plaza. Back of him was sound now—the faintest whisper of calloused feet on the stone, by which Driggs knew that new guards had been assigned him.

A third scuffling sound came toward him from one side, and Arkos' unmistakable voice barked orders to the guards. Driggs stopped and stood still, locating the sound, then turned and charged back in a mad rush.

His arms swung out in front of him. One of his hands touched smooth skin. He gripped at it—then Argos' fist, heavy as a club, struck him awkwardly on the side of his head, and he went down.

Arkos scuffed away then, and after a time Driggs got to his feet and moved on. He was weary of this task of searching through the dark, but at last he heard Duvaaurier's voice.

Duvaaurier came to him across the plaza and the sound of Duvaaurier's two guards *scuff-scuffing* on the stone came after.

Duvaaurier said, "Ah, *mon ami*, it is as I feared. You looked upon the blue light when it blazed alone—yet you live, and that is much. Come, she permits that you stay with me until the blindness passes."

DRIGGS had slept. He had even eaten—thick, syrupy food. And the blindness was gone.

He was in Duvaaurier's workshop, the long, low building on the red rock plain where the ships stood. He walked rest-

lessly back and forth while Duvaaurier, sitting on a low bench, watched him.

Duvaaurier said, "All is not lost. To have youth and courage—that is great. But for me, I think I have lost both of those, else how could I build these ships for her when I know what she plans?"

Driggs stopped his walking. "Maybe we'll put a crimp in those plans," he said.

"Thus speaks youth and courage." Duvaaurier's eyes were sad. "I," he said, "dare not hope. I only build ships—for her."

Driggs picked up a little sheet of the coppery metal, thin as paper, and laid it down again, and stood looking at it without seeing. He said slowly: "That is nothing. Listen—"

"She has taken Kitten. She has promised not to harm her, but we know what she would have done this last time—and I don't trust her now. The devil in her has shown itself too plainly, and I'm no child to be fooled by her. But, Duvaaurier, I tell you I've never seen her yet that she didn't attract me. I know what she is, and still I—"

He stopped and stood staring down. Duvaaurier drew a long breath and let it out again, slowly. His voice came across to Driggs very low.

"Does any one know what she is—devil, or angel—or both—which is to say, a woman? But I think, *mon ami*, that she could shake the steadfastness of the saints when she looks at one—"

Duvaaurier, too, left his words hanging in air. He sat staring down at the floor; then he moved his withered arm forward and looked at that and passed his good hand across his forehead wearily.

He said, "Woman, or devil? But—may Heaven forgive! I have built the ships for love of her!"

Then he got up and did not look at Driggs again but walked out into the sun.

Four of the big ships were done. The fifth was only a huge wooden form with scaffolding all around. Men stood on the scaffolds and spread coppery liquid over the wooden form in a thick coating and let it dry. Then they smoothed it out as if it were plaster, and after that others polished it till it shone like buffed copper.

Driggs walked up to where Duvaaurier was standing and stood at his side, watching the men. He said, "That's a good trick, too, Duvaaurier. How did you get on to it?"

Duvaaurier shrugged. "Dra Tor did it. All of Dra Vonga's magic, Dra Tor did. But he meant it only for good."

"Dra Tor was her father?"

"Yes. He died shortly after I landed. Then things changed. Fozan's father was king, and Fozan was heir to the throne. But royalty meant little to these simple people. Dra Tor had carried on his research in secret, and she took it over."

Driggs said, "The ship that brought us over was gray, not copper-colored."

"Another metal," Duvaaurier explained, "but applied in the same way. I do not know the secret. Again it had to do with vibration, inducing a change of phase."

"But the walls are thin," Driggs objected. "Why didn't we freeze to death out there?"

Now Duvaaurier's face beamed. "Ah, but that is mine. . Come." He took Driggs by the arm and hurried him across to where the little ship stood—the little ship whose steel plates, lapped over and riveted, were red with rust.

Green guards followed them, and one of them sprang forward and barred the round porthole that was the only entrance to the ship. Duvaaurier turned and walked away.

"Since I brought the last load of these green ones from Grokara I have not been in my little ship," he said. "But

the big ones are the same. I will show you."

Driggs stopped suddenly and stood perfectly still. He laid a hand on Duvaaurier's shoulder. "Do you mean," he asked, "that the little ship is in working order?"

Duvaaurier glanced at him sharply, then looked away. He said very low, "Yes. But put the thought from your mind, *m'sieu'*. The green ones are always here."

INSIDE one of the other big hulls Duvaaurier pointed to the walls. "Thin," he said, "but with a mirror polish."

Driggs nodded. "Check," he said, "but go on."

"There is nothing cold in space, *M'sieu'* Driggs; there is only space. That is to say, an object in space which has heat of its own cannot lose that heat by contact, for it contacts nothing. Then, if you also prevent it from losing heat by radiation, it stays the same temperature, *n'est-ce pas?*"

Driggs said, "The mirror finish—and they're using the same things in houses now. But great heavens, man, to gamble your life on that!"

"Also on this," Duvaaurier said, "and again I won."

He was pointing now to the big central truss that Driggs had seen before, and to the thing mounted in it that looked like a three-cylinder radial motor.

The truss ran lengthwise of the ship, and stood vertically, and the cylinders of the motor were set in the same plane. They sprang outward from a heavy axle suspended in the truss. They finished at their outer end in a ring of metal tremendously strong.

"There are small ones," Duvaaurier said, "at bow and stern, but they are to control direction only. This one drives."

Driggs shook his head. "You've got me where I'll believe most anything,"



Driggs turned and whipped the weapon from beneath his coat. It glinted with deadly menace under the green light.

he said, "but not that. That whole thing isn't more than five feet across, and I don't care how fast you spin it or what it does——"

"But it does not move. Still it drives the ship. In my little ship the impeller was only a foot across. Yet it brought me here.

"Still that little impeller was crude,
AST—7

and I could not control it. I drove on and on through space, always faster, always driving in a straight line. And at last I checked it. This little world was ahead. It flashed past, but I turned and came back. But the impeller, M'sieu' Driggs, *c'est magnifique!*"

Duvaurier's eyes were shining, and he ran his one good hand through his black pompadour and gesticulated as he talked. And Driggs, listening intently,

learned of cosmic magnetism and a universal gravitation. All of space, it seemed, was under tension: lines of force, acting always in all directions, but always in balance, were neutralized by their own opposing pull.

But Duvaourier's so-wonderful gas—there was the secret. Polarized, it blocked off the cosmic strain in the direction of its negative polarity and left the opposite line of force in full effect.

"Each cylinder," he explained breathlessly, "is but a container for the so-wonderful gas. Now it is inert, but when the current passes through those coils the gas is polarized. Then the head of that cylinder tries to push outward, and it pushes, m'sieu', with force enough to lift this ship."

"You have three," Driggs suggested.

"Exactly. And they all pull at once, and are, as you say, in neutral. But when the controls are moved they swing on this axle. One of them perhaps aims upward; one of them partly upward and ahead——"

"I get it," Driggs said. "You can get any combination of directional pulls you want. Man, why didn't you tell the world what you had? The name of Duvaourier would have been the greatest name in the world!"

Swiftly, the light left Duvaourier's face. His features sagged, and his head sank slowly. "But that Duvaourier," he said, "was—conscientious. He was a little fool. He must prove everything beyond any doubt before he told. So he made one test flight secretly. And now he will never go back."

He turned his face away abruptly, then, without a word, moved forward to another compartment and was gone.

Driggs stood looking after him, and, for the first time since this wild adventure had begun, his lips were set in something more than desperation. Hope, the first beginning of a nebulous plan, was in his mind.

XV.

SUNLIGHT, softened to opalescence, filled the room yet cast no shadows. It lighted Katharine Putnam's face and made very lovely the soft oval of it and the delicate olive tints in her skin. But it showed, too, a little flush of heightened color in each cheek, and the girl's eyes were very steady and coldly contemptuous when they rested on Dra Vonga.

Dra Vonga was reclining indolently on a broad and very long flat couch, carved apparently from a single block of dark wood and richly inlaid with other woods of delicate sheen. Cloths of silk and velvet in dark colors and exquisite luster were thrown across the couch. Dra Vonga lay on these with more of the silken masses heaped as a pillow beneath her head.

One other filmy, lustrous veil hung from her shoulders and lay across her, but, while the other cloths were of rich purples and ox-blood reds, this veil held only subtle shadings like the inside of a shell—or like dew glinting under the morning sun. It was thrown negligently across Dra Vonga's reclining figure, and the filmy laces with Dra Vonga's creamy skin and her hair of spun gold were sheer beauty against the darker background.

Katharine was standing. She crossed the room to an embrasure in the wall and stood looking out. A huge gray ship of metal was out there on a wide, checkered pavement. It was the ship that had brought Rance Driggs and her from Earth. She turned away from it and moved back again toward Dra Vonga.

"I will never consent," she said. "If I thought you could make him happy I would go in a minute, but——"

Dra Vonga said softly, "Never have I seen any one like this Rance Driggs, and who are you to stand in my way? But listen, I will tell you again——"

"The word of Dra Vonga is given. I will have Arkos take you back to your Earth. You will stand again on that mountain in your own world. You will be safe, and Arkos will leave, but Rance Driggs stays here. For the last time Dra Vonga asks: Do you consent?"

Katharine Putnam shook her head tiredly. She said: "I can't seem to make you understand. I'm not thinking of myself. Rance wouldn't be happy with you. You have beauty but nothing else, for you have, I think, no soul."

Dra Vonga's brows above her long-lashed, violet eyes arched in perplexity. "A soul?" she inquired. "I do not understand."

"I would hardly expect that," Katharine said softly. Then Dra Vonga raised her hand, and a green-fleshed man came in from an adjoining room.

Dra Vonga said coldly, "Take this Kitten to the ship. She will wait there until Dra Vonga comes."

Katharine said sharply: "The ship? You mean that you are sending me back—alone?"

Dra Vonga smiled.

"Alone—yes. But not to the Earth. Perhaps Kitten will find Grokara amusing."

BACK at the red field Driggs and Duvaaurier had left the scene of Duvaaurier's activities and gone in search of a more secluded spot. They had turned toward the hills.

Mountains edged the red field on one side and even thrust themselves out in a sharp point into the field itself. One mountain, half the height of the rest, but still of magnificent proportions, lifted its forested sides not far from the ship. Duvaaurier had picked this place at the base of the mountain for his operations.

Now, where a black limestone ledge projected and the stratum above had been worn away and eroded into caves, Driggs and Duvaaurier sat on the edge

of the outcrop and looked down at the row of ships and the crowding, bustling figures of workmen two thousand feet below.

Driggs said thoughtfully: "Four of them are done. We haven't got much time."

Duvaaurier shrugged. "Time," he asked, "what is that?"

"I've got to learn," Driggs said. "There's a way out of this. I don't see it yet, but it's there. But I've got to know my way around. I've got to know what all this damned magic means. Fast time—slow time—tell me what it's all about."

Duvaaurier said, "I will try," and sat in thought.

"You have seen the cinema," he said at last, "and the slow motion picture. Yes? A man runs slowly. He springs into the air—slowly. He rises; he seems to float; he comes down again—always slowly. Yet, if you were that man, M'sieu' Driggs, the leap would be to you a matter of a part of one second. Is it not so?"

"Check," Driggs said.

"But to me, watching, it would be many seconds, for the film runs slow."

Duvaaurier was silent for a minute. Then: "*Regardez!* You are still that man. And now the film is speeded up, a thousand, ten thousand times as fast. I watch. And what happens?"

"It blurs. At last I see nothing but lines that quiver. Yet, for you, the man in the picture, time is always the same; it still seems the same part of a second while you take your leap. Yet—and learn this, for to not know it is to be in danger, perhaps—"

"While I, on slow time, rise from my chair, you, the man in the picture have run and leaped and done ten thousand other things. You have lived perhaps a year. And in that year you could have come down to me a thousand times to kill me. And I would have been

only rising from my chair, seeing only a blur of lines."

Driggs said slowly, "Give me a minute to get that. Electric vibration; the actual speed of all the electrons increased—and that speeds up our perception and all our functions. We're on fast time now. Then that vibration I saw—that invisibility——"

"Then you were on Earth time, which is slow. You could not see that which ran fast."

"Could they see me?"

"But yes; and your movements would have been droll."

DRIGGS spoke thoughtfully. "Dra Vonga told me in the temple she could have killed me a hundred times over, while I was jumping to the platform. She had slowed me down to normal, but the others were on fast time. She did it with a blue blast from down below—she gets some one on one of those black spots and lets them have it."

"Faster or slower—it is all a matter of vibration," Duvaurier agreed. "Dra Tor built his great device which changed the time for all Xandros. She keeps Xandros on that time while the sun passes over. Then when evening comes and the sun is low she puts the globe on normal time again by changing the setting of the big machine. The night goes—*pouf*, like one night. Then begins again the long day which is like many years."

"But the ship was invisible on Tabletop," Driggs objected, "yet Arkos and Fozan, when I saw them, were on Earth time."

"A small machine in each ship is installed by Arkos at her order," Duvaurier explained. "It creates a vibratory time zone that includes the ship and all who are in it. But when they leave the ship their magnetism is discharged and again they are on slow time."

Driggs pointed down the slopes where the forest thinned to occasional

trees. A man was coming out from among the trees and climbing toward them. "That's Fozan," Driggs said absently, but his thoughts were elsewhere.

"I'm beginning to get it," he said. "And all this helps. What looked like sheer witchcraft is—is just something we don't understand."

Recollection flashed a picture then. He said, "Good Lord; that's what I told Kitten—so long ago."

Duvaurier was looking across the sky. "The gray ship comes," he said. "I must go down. It may be that she will want me."

But he sat still and bit nervously at his lip; and Driggs could not tell whether his words came from fear or hope.

Fozan was climbing. He stopped and waved to them. Then Driggs, watching, stared beyond the bronzed figure of Fozan and made inarticulate sounds in his throat. He was looking at a huge beast that came out from among the trees and stood looking up the hill.

It was the same as the one he and Katharine had seen from the ship—an enormous brute, its body slung close to the ground, long, shaggy hair almost brushing the rock on which it stood. Its head was mounted on a long, leathery neck; and the head, with little ears pricked forward, was high in air and pointed uphill.

Wind blew down the slope, and some scent must have come to the beast, for it opened its mouth and emitted a single scream, a blast of savage fury that jerked Driggs to his feet; then stones were dashed down the slope with clattering sounds as the beast charged.

Driggs turned. Back of him the green guards were staring past him. Their mouths were opened wide. They, too, screamed, but their cries were cries of fear. They tugged at their weapons, then turned and ran for the caves at the back of the gash in the mountain-side.

Driggs knew suddenly that Duvaaurier had not moved. Duvaaurier said, "It is only a *shoga*, and they are cattle. Do not be alarmed. The green men of Grokara do not like the *shogas*, nor do the *shogas* like the scents of Grokara. In that they are wise, for Grokara—that is hell."

Duvaaurier was looking placidly down the hill. Halfway down the steep slope Fozan was holding the ugly head of the beast by one of its pointed ears. Fozan called out: "I go now. The green ones—will not be pleased."

He still held the big beast by one ear as he led it away toward the trees below.

STILL FARTHER, past the base of the mountain, a huge ship was settling softly upon the red rocks. It came to rest with scarcely a sound.

Duvaaurier said softly, "*Bien!* That was well done. But does not Duvaaurier's impeller operate well, also?"

"It's smooth," Driggs said. He was watching the ship.

From an opening port the figure of Arkos came out—even from this distance the white scar on his cheek could be seen. He spoke to other green ones, then returned to the ship.

The port closed, but an instant before the circular gate swung to place, a flake of color seemed to fall out—red—like a bit of red cloth. It caught in the closing port and hung by a thread. It was still hanging and fluttering when the ship rose.

The gray shape swung toward the mountain and passed almost overhead. Driggs did not move; neither did he breathe. But his head bent slowly back as the ship moved above. He was watching it as the bit of red broke loose and was left dancing in the breeze.

He slid off the ledge then and moved down the hill. Duvaaurier went with him, while the green guards came from the caves and followed with white tubes

in their hands. At the foot of the first tree the bit of red came to rest.

Driggs picked it up, and still he said nothing, but his hands trembled, for they were holding a scrap of cloth that had been part of Katharine Putnam's frock.

He reached in his pocket and brought out the fragment that had been left in his hand when the girl was torn from him in the midday darkness when he was blind. He held both pieces out toward Duvaaurier.

"Where are they taking her?" he asked hoarsely.

But Duvaaurier was looking far off and up in a cloudless sky. The gray ship had mounted high. It was only a speck of darkness against the blue. The speck melted while they watched, and the blue took it up as if the sky had blotted it out.

"They are heading," Duvaaurier said, "into space."

XVI.

THEY returned to the ships in silence, and only one sentence came from Driggs' nervously twitching lips.

The green guards were back of them and could not see when Driggs held out his two hands and brought the tense fingers curling in toward the palms. "I'll break her—like that!" he said.

He regretted it instantly, for Duvaaurier only glanced at him, then looked away, and Driggs wondered, if it came to a show-down, just how far he could count on Duvaaurier's help.

Time passed—hours of time. Driggs tried twice to leave the ships and go toward Dra Vonga's temple, but the green guards stood in front of him and made peremptory, barking sounds and drew their light-ray weapons when he tried to crowd past. He had no wish to feel that ray on his brain again.

And at last Dra Vonga sent for him.

She was in the same room where she had talked with Katharine—sitting,

indolently half-reclining as before, on the couch. And again the sheer beauty of her creamy body and barbarically gorgeous surroundings made Driggs' breath catch in his throat.

But he stood just inside the doorway and said nothing until the green guard was gone; then he took one step toward her. But only by a conscious effort could he think of anything but the welcome in her violet eyes as they gazed up at him with childish candor. But he said harshly: "You took her away. Where did that ship go?"

Her voice was almost plaintive. "Why are you not nice to me, Rance Driggs? Am I so ugly to behold?"

She raised one delicately molded arm and regarded it. And the lacy wrap that held the lights of dew under morning sun fell away from her shoulder. "Listen," she pleaded, "to what I say.

"Dra Tor and his father before him did much magic——"

"I know all about that," Driggs said.

She smiled and shook her head, and her eyes held a mischievous light. She reached up and brushed a lock of gold back from her face.

"You know only the littlest beginning of it," she said. "And I—I will teach you all. Together we will rule many worlds. Do you not believe that?"

"I believe that you've got plenty of magic as you call it," Driggs agreed. "Where did you send that ship?"

"How do you know that she went in the ship?"

Driggs said grimly, "Red magic," and felt of the fragments of cloth in his pocket. The touch of them was refreshing, like the touch of cool, clean wind.

He moved over and stood at Dra Vonga's side and looked down. "Where is she?" he asked.

About the soft roundness of Dra Vonga's throat was a fine spun chain. It lay loosely against her and vanished beneath the filmy folds of her wrap.

She looked up, and there was thought behind her eyes that Driggs could not read. "I will be kind to you," she said gravely; then she raised one hand and drew the chain and the little metal box it held from where it had nestled. The jeweled cover flew open, and the blue jewel, blue as a Sierra sky, rested on its little cushion of gold. It was like the one he and Katharine had found.

"I gave Kitten one of these to wear," she told him. "It is tuned always to vibrate with the vibrations of this second jewel, and that vibration is close to what we call thought. It makes a carrier over which travels thought and pictures and—and—but who is Dra Vonga to understand the many magics of Dra Tor! But look, Rance Driggs, and see this Kitten."

SHE was holding the jewel in one hand. With her other hand she reached out and took his arm. "Kneel," she ordered. "Lean close and see."

He was looking down into the jewel. Again he saw flickering flames of red and yellow at the bottom of a deep-blue pool. And again he seemed to burst through those screening flames.

He was hardly conscious of kneeling at Dra Vonga's side, although the perfume of her scented body was about him. For he was seeing the blue pool no longer, but a sweep of desolate barren land under a cloud-filled sky, and a figure of a girl with a torn, red dress leaning and struggling against a wind that whipped the dress about her.

He said, "Kitten!" in a strained, whispering voice. And, as if she had heard, the girl raised her hand and opened a little jeweled box and stared down at a jewel. Instantly, he and Kitten were face to face.

It was as if he stood beside her. He saw her lips move and seemed to hear her voice. "Rance!" she said. "Why, Rance!" And, though she had not been crying before, now there were tears in

her eyes—until her eyes opened wide with horror and amazement and unbelief.

And only then did Driggs feel the soft pressure of Dra Vonga's arm about his neck.

He was bent above her, and abruptly, with passionate fervor, she drew his head down, held it for an instant while she closed the metal box.

Then Driggs' two hands were on her shoulders, and he pushed himself back with strength that threw her as much as it did himself.

He leaped to his feet. "You let her see that!" he blazed. "That lying, damnable——" He stopped, for abruptly he knew that his rage was not so much for Dra Vonga as for himself. For that instant had been honey-sweet, and the perfume of her was still in his nostrils.

Dra Vonga rearranged herself and drew her filmy scarf about her. "Patience," she said—"that is a new lesson for Dra Vonga. And to be roughly thrown aside——"

Driggs broke in. "Give me that jewel!" he snapped. "Let me see Kitten; let me tell her——"

He had thrown himself two or three paces away from her; now he moved toward her again, one hand outstretched. He said again: "Give me that——"

Dra Vonga's hand flashed up.

It may have held something—he could not see. But it aimed at him, and a shock went through Driggs that drew every muscle into a quivering, helpless knot. Vibration filled him and tore at his nerves. He wanted to cry out, but his throat was held tight, and he could not breathe.

His lungs were restricted for lack of air, and always that unbearable quivering tore through him.

He heard Dra Vonga say: "Many magics had Dra Tor. One more minute

of this and Rance Driggs will never breathe again, but——"

Her hand dropped slowly and hid beneath the coverings of the couch, and Driggs gulped air as if he had been under water and had just reached the top.

"I am still kind," Dra Vonga said.

Two green guards came into the room and led Driggs away.

BACK at the red field Duvaaurier waited for Driggs impatiently. Fozan was with him as he went to meet Driggs.

"You are downcast, m'sieu'," he said and waited to control his voice, "but listen, while I speak carefully with words these green Grokarians cannot know.

"The gray dirigible—*comprenez, m'sieu'?*—has returned. And the one with the cicatrice on his cheek, also!"

"I get you!" Driggs' voice was low but trembling with intensity. "Was the——"

"Mademoiselle?—*mais non!* Ah, if only you understood the language of France! I taught her the words of Earth when she commanded, but I would not defile my own tongue—pardon, *mon ami*; I mean no disrespect—so I taught her the English. But the green ones from Grokara have also learned."

Driggs said earnestly: "You taught her—then that talk about learning it from—but go on, Duvaaurier. What about—mademoiselle?"

"Nothing, m'sieu', but we know this, that the marks on the hull were made only in one place—the black chalk cliffs of Grokara."

"Is it pretty bad there? Barren land—storm clouds—a wind that blows——" Driggs stopped and swallowed. He was again seeing that lonely figure.

Duvaaurier said wonderingly: "You have seen that? You have been there?"

Driggs did not reply. He was looking beyond the row of monstrous metal shapes to the smaller one the color of red dust—Duvaurier's little ship.

He walked over to it and the others followed, Fozan coming close once and touching Driggs' hand in sympathy for the sorrow he felt but could not understand.

Driggs laid his hand on the rusted hull of Duvaurier's little ship, while the green guards, sensing something wrong, sprang to the open port and placed themselves before it, their weapons drawn.

Driggs licked his lips. "If we had just one moment of time—just one chance," he said. "We could take off and——"

Fozan's bronzed face was abruptly close to his. Fozan whispered haltingly, while he searched for words: "Does Rance Driggs want the green ones removed. Not for always—I could not do that—but for a little time?"

Driggs said, "If you could do that, Fozan——"

Fozan bowed his head and looked for a moment at the red rock beneath his feet. He said, "In your world—you saved me from the serpent. My life is yours—I give it to you now. In ten *thons* be prepared."

Fozan turned and walked away, and his head was held high.

Driggs, watching him go, said wonderingly: "Now what the devil——"

But Duvaurier whispered, "In ten *thons*. If the son of Fozan's father says it will be, it will be."

TEN THONS—it was an indefinite measure of time.

Driggs, standing with the Frenchman many hours later beside the unfinished hull, looked about at the men of Fozan's race. Their green guards were everywhere, and the four who guarded Driggs and Duvaurier kept close.

"But what can he do?" Driggs demanded under his breath.

Duvaurier was pretending to study a drawing. He said softly: "How can we know now? But he pays for it with his life, this Fozan. Ten *thons*, he said. They measure the time subconsciously; I, too, have learned the trick."

Driggs looked toward the forest where the mountain slope began. It was only a hundred yards away. Vines there were weaving sinuously back and forth in smooth, ceaseless motion. He kept his tone casual.

"When," he asked, "is that?"

The paper in Duvaurier's hand was trembling with a little rustling sound.

"I think," he said softly, "it is now."

Driggs did not dare look at him or let the green guards see his face. He stood looking toward the hundred-foot-high wall of the forest, and he saw the first motion there.

A vine whipped its head sharply upward, then flung its full length high in the air. Other vines lashed out and up; the whole face of the forest was a whirl of struggling stems and leaves and vines, although nothing else had moved nor had any sound come.

A green guard shouted loudly, and the busy hum of workers went still. Abruptly, among the lashing vines, a great head broke through the green twenty feet above the ground. A leathery, black neck followed. A mouth gaped red and hot in the head and clamped down on a vine. "*Shoga! Du shoga!*" the green guard yelled.

Some whirl of wind must have taken the scent of the guards forestward then, for instantly the curtain of green burst into violent eruption. Heads, with broad, gaping mouths; necks of black, wrinkled leather; huge bodies with shaggy hair almost touching the ground—these were the *shogas*.

The forest spewed them out into the open, fifty or more of them, and they

screamed and squalled with hideous sound, but stood waiting and arched their necks or swung their heads from side to side.

Men of Fozan's race were on their backs. One huge beast broke free and drove down. Fozan was on him. Fozan was urging him on, stabbing at the tough hide of the brute's neck with a metal hook. He drove down upon the four green guards who had Driggs and Duvaaurier in charge.

Lights flashed from ray projectors, but the *shoga* seemed immune. Fozan was clinging flat on the animal's back, as the big jaw gripped the first of the guards and another went down beneath trampling feet. Another ran, but the fourth stood his ground.

Across the red field a pandemonium of shrieking sounds was like solid waves. Duvaaurier shouted above the din: "The ship, m'sieu'—the ship!" Then the green guard turned, and a metal tube was in his hand.

Duvaaurier flung himself upon the ground, but the muzzle of the projector followed him down. It had not yet flashed. Driggs stepped in.

There was no time to knock the weapon aside; no time for anything but one solid blow. He put everything he

had into a close upward drive for the green jaw.

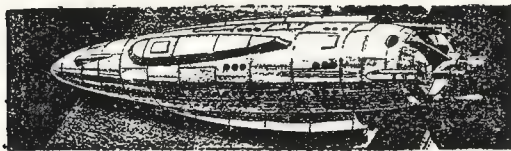
The uproar of sound was about him. From the forest came thunder of pounding feet as the *shoga* herd came down. They were huge and ungainly, but they came like leaves before the wind. They screamed savagely as they came, and the men on them opened and closed their mouths, but seemed to make no sound.

Driggs heard the roar of them as they came on, but he saw only the reeling but still upright figure of the green guard. The man's projector was spitting jets of light but aiming high. In another instant it would slash down. But it was then that Fozan charged back, and the green body became something utterly hideous beneath the feet of the infuriated beast.

Duvaaurier, again on his feet, was crying: "The *shogas*! M'sieu', they are gone mad!" The sound of the charging herd was like rolling thunder that mingled with the unending din of their cries.

Driggs gripped Duvaaurier's bare shoulder. Ahead, not twenty feet away, was the rusted hull of Duvaaurier's little ship. He took Duvaaurier with him as he threw himself across the red rock.

To Be Concluded



Stranger from Fomalhaut

A tale of the skyways by Clifton B. Kruse

ENGINEER PROCK glanced up anxiously from the arc computer. Long, thick-knuckled fingers rumpled the fine strands of his white hair and his voice was unusually tense.

"But we missed Pluto by no less than four million Earth miles. And I tell you, Wiljon Kar, this thing looms most hideously in the sky."

The iron-gray eyes of the young man flashed with indomitable courage. For a moment, he studied the plottograph above the ship's controls, then turned quickly toward Prock.

"The W62 can make it. We will not have need for a refueling upon Pluto. Look closely, Prock. By a series of no more than seven arcs we can swing in line with the strange comet's orbit. Give us ten hours in the proximity which we can attain and there will be a report for the Council at Toronto a full week before the comet nears the Solar System."

Some measure of the younger engineer's enthusiasm permeated the elderly Prock. He returned his attention to the arc counter with feverish activity. Sonorously, his voice barked out the arc corrections.

In immediate response, Wiljon Kar blasted the transport's torps: the W62 swerved brilliantly in the black void of space. The plot deck resounded with the ear-splitting whine of its strained beams as the transport hurled itself with titanic bursts of energy.

The W62 was leaping forward in mad acceleration. Far behind the fiery ship

lay the Solar System. Still they drove onward, outward. The lean, muscular fingers of the pilot rested tensely upon the transport's controls. Already they were farther away from the Sun than man had ever dared travel before.

Across the screen of the plottograph a small red light moved slowly yet steadily toward the center. It was nearing rapidly due to the extraordinary velocity of the W62. Scant inches from the center point, Prock called out the final arc correction. At once Wiljon Kar blasted the curve. He held the W62 to first-limit acceleration for moments only. Then, with a quick flourish, he threw off the power lever. The shriek of the beams quavered weirdly and faded into heavy, ear-oppressing silence.

Prock adjusted the telescopic plate with trembling hands. Soon the instrument glowed with nefarious life. In breathless awe, the two engineers stared at the strange body which was hurtling toward the Solar System.

"It is not a comet!" Prock stared wide-eyed at the curious object. "And we are nearer it than we calculated—much nearer!"

Stretching dragonlike across the telescopic plate the rounded head seemed a seething mass of dark-green vapor. The orange-red fire of its cometlike tail extended in tapering length for miles. At the junction of the ovoid body and its glowing extension there was a steady pulsation of white-hot fire.

Abruptly Wiljon Kar arose from the pilot seat.



The fiery tentacles whipped in merciless fury—but he fought on—madly—

"Hold the position, Prock," he ordered. "I am going above to the observation deck. There is something peculiar here. The council sent us upon this trip in order to tail a comet through the Solar System. But I swear that is no comet. It looks like—I swear it is a—space ship!"

"Wiljon Kar! Prock!"

STUMBLING excitedly into the plot deck, collarless and blue tunic unbuttoned, Mardico halted in sheer horror

before the telescopic plate. With one hand gesturing wildly toward the image and the other clutching frantically upon the engineer's jacket, the old man wheezed hoarsely, between his throaty gasps for air.

"I was with Twombley when he first got the call—a regular click on and off right in the flash cap. It's coming from that—that thing out there—like it's a call from another transport, only the flashes don't go according to the codes. And I swear it, Wiljon Kar, that not

the one nor the other of us has even so much as whiffed the smell from a cork in a single tankard of roulek."

"Don't go yet, men," Prock cried out suddenly. He was sweating over the controls. A sharp quiver throughout the transport indicated a frontal blast. Prock was braking the forward drives steadily now.

Wiljon Kar and Mardico swayed groggily with the abrupt negative acceleration. Then a quick side blast sent old Mardico in a clutching stumble toward the doorway. As the W62 came to a full stop he sprawled in a lunging fall, his feet inside the plot deck, the rest of him flailing about the ramp beyond the deck.

"Sacred nebulae!" Wiljon Kar stumbled hastily back toward the controls. "Look at the thing. Look at it, Prock!"

The image in the telescopic plate was spinning madly. Its fiery tail was gone. Yet even as they stared the swirling greenish mist grew dark and viscous.

"But see the tail of it," Prock exclaimed. "There's a core—it glows with a yellowish light——"

Immediately the W62 became pitch dark. Not a light glowed nor would a single connection draw energy from the vast storage cells. The W62 was dead. Silence so perfect that it seemed to bear substance closed in upon the bewildered crew.

"Throw in the reserve batteries," Wiljon Kar commanded. "Hurry! The cold will creep in within an hour. Return and report to Prock. He'll remain at the controls. Do you understand?"

Scarcely had Mardico shuffled down the winding ramp than Wiljon Kar was hastening in the opposite direction. The master engineer clambered awkwardly in his frantic rush. For a moment only did he pause before the flash-marker's station to utter a word of encouragement to the frightened mechanic, Twombley.

Around another turn of the ramp and he raised his voice.

"Hals? Are you there, Hals?"

Deep silence mocked him. Wiljon Kar shivered in the darkness. Already the icy fingers of frigid space were reaching through the stout walls of the W62. He shivered. The tips of his fingers were becoming numb.

Crawling across the low-ceilinged floor of the compartment just above the plot deck, Wiljon Kar hurriedly checked the orderly row of wires, the numerous connections and mechanisms of the great transport.

Thick darkness pressed upon his eyes. He must work by the touch of his hands alone. Yet even now his fingers were so cold that he could scarcely determine what it was that he felt. Wiljon Kar felt his way from one end of the deck to the other. Nothing seemed out of order. Obviously, the trouble, whatever it was, had not occurred in the W62's controls.

He was shaking with cold when he returned to the plot deck. A strange fear was eating into his strong nerves. This would be death.

"Prock? Are you still here?"

The elderly engineer's teeth clicked sharply. His voice came in gasps.

"Still here—ship—still dead?"

"Everything above seems in order," Wiljon Kar spoke sharply. "I can't fathom it. There's nothing to do but get in our space suits. We can't endure this much longer."

WILJON KAR felt strangely calm. The rumble of old Mardico's voice seemed to lessen the tautness of strained nerves. But they must work fast. Already Mardico was starting to the ramp to feel his way to the flash marker's station, dragging an extra space suit along for Mechanic Twombley.

"Hear me, Mardico"—Wiljon Kar's voice had suddenly become deeply benedictive—"we are flying engineers—never forget the tradition of the corps: death finds us carrying on."

"Hells fury!" Mardico exploded harshly that his leader might not sense the softness which was welling so strangely in his heart. "And the devil himself is the one to worry, says I, for such a crew as this will make a merry mess of Hades."

"Keep moving," Wiljon Kar ordered. "With our space suits we can endure for several hours—but we must keep moving. You and Twombly keep on the go—and cover every inch of the W62 until you find Hals."

The slap of his fist against stiff leather announced that old Mardico had saluted. Now came the sound of stiffened fingers expertly wadding a huge ball of weechie weed. Three sluffing bites and the quid was stowed in the bewhiskered old jaw. Mardico chewed vigorously, puffed out his chest and spat the length of the ramp before snapping the headpiece shut.

Wiljon Kar felt the elderly Prock clinging to his arm. "I'll hold the plot deck." The white-haired engineer was forcing the words from between chattering teeth. "Nothing else matters—Wiljon Kar—duty is—life itself—to a flying engineer."

Even as Prock screwed the headpiece in place, Wiljon Kar moved from the plot deck. His own suit remained slightly opened. He was still thinking about Hals. With the space suit tightly locked no sound would penetrate to his ears, for the radio phones, too, were strangely dead.

He had to keep going, had to do something. Something had happened to the W62, some terrible catastrophe which hitherto had not been experienced in any space ship. They were powerless. All batteries were drained. They could neither blast the torps solarward again nor could they hold out many more hours against the absolute cold of space—millions of miles beyond distant Pluto.

At the farthest tip of the ramp, Wiljon Kar paused to complete the fasten-

ing of his headpiece. Then, slamming his shoulder viciously against the port, he scrambled energetically out upon the glass-domed observation deck beyond the protecting hull of the transport.

The queer ball of greenish mist hung motionlessly in black space. It was no longer seething with the nefarious energy of its own creation but seemed to pause in speculation upon the edge of the Solar System. At the polar extremity nearest the W62, the strange ball glowed with a quaint yellowish illumination. Then, Wiljon Kar espied the narrow beam of light which extended from the glowing tip of the ball directly to the W62.

Excitedly, Wiljon Kar pressed close to the glass of the dome in order to see more clearly. He gasped. There was something crawling over the hull of his own ship. It was moving slowly toward the observation dome.

It was a figure in a space suit. Wiljon Kar shouted, uselessly, for the sound of his voice could not extend beyond his own suit. But a fierce joy throbbed in his chilled veins. It was a man. It was Mechanic Hals.

Quickly he released the outer port, stumbled and slid perilously toward the figure. Hals, seeing the dash, braced himself and caught Wiljon Kar's hurtling body in an outstretched arm. Hals was talking, telling him something. Wiljon Kar shook his head and gestured that his radio phone was dead.

Now, Hals was tearing a strand of insulated wire from his own suit. Swiftly, he affixed the wire to a connection upon Wiljon Kar's radio phone. Immediately, a new and comforting warmth burned through the master engineer's headpiece.

"Wiljon Kar, do you hear me?"

"Faintly—but why are you here? Do you know what's happened?"

"I was getting back to ask you," Hals was shouting into the phone. "I'd come up here to the observation port—had

the cameras set to get some pictures of the comet when all of a sudden it stopped—and we stopped too— Then I thought I saw something burning—like our arc-finder points were on fire. I came out to investigate—but they look all right—and there's a funny line of light running from that damned comet right here to our ship. What's the matter?"

"The W62's dead," Wiljon Kar called back. "All the electrical energy's drained— Collusus—I think I see it now! It's spaceman's luck that you weren't inside the ship—just plain spaceman's luck! But wait! Don't go back in the W62, Hals. Your suit's in perfect working order—if you get inside the ship their power will drain it, too."

Hals sucked in his breath noisily. He sputtered! "You—you mean that—that crazy comet——"

"It isn't a comet," Wiljon Kar was shouting. His gaze was fixed upon the distant, greenish ball. Fists clenched with the absorbing intensity of his thoughts. "There's intelligence there—intelligence which has directed that—that space ship from Fomalhaut toward our own Sun."

"Ship! A space ship!" Hals moaned, moved his huge body nearer Wiljon Kar.

"That's the answer!" Wiljon Kar was addressing his own slowly congealing thoughts rather than answering the mechanic's suggested question.

"It's motionless save that it is riding with the universal orbit of our Sun. The stream of fire which caused us to assume there was a strange comet approaching our system from Fomalhaut was merely the driving energy from the thing's exhausts.

"Don't you see it? For three years now the observatories upon Earth, Neptune and Pluto have sighted its steady approach—hailing it as a new comet."

"Here listen, Wiljon Kar. I'm no scientist—but any spaceman knows that

it can't be reckoned like that. Great Polaris! Why, the star Fomalhaut is more than twenty-four light years from our Sun!"

Suddenly, Wiljon Kar turned and grasped the mechanic's padded shoulders. In his excitement he was shaking the awed Hals.

"Another hour—maybe two—that's all we've got— Do you understand? Prock—Twombly—Mardico—they're down there in the ship—freezing to death— Do you understand? We've got to fight—got to make them release our energy."

Hals got to his knees. Cold, ruthless eyes stared through the space cap. One arm clasped Wiljon Kar's shoulder, the other was lifted vindictively toward the mysterious menace.

The mechanic's voice rumbled deep and harsh through the radio phone. "Give the order, Wiljon Kar. Whether they come from Fomalhaut or Hell—the flying engineers will be the reception committee—blast their souls."

SCRAMBLING monkeylike over the hull, Wiljon Kar speedily regained the observation deck. Dropping through the port he ran awkwardly through the ship. A word to Prock and to Mardico—but hurriedly, for headpieces must be snapped into place again. Another stop to feel about the bewildering blackness of a storage deck.

Moments later he was again on the observation deck. Standing just outside the glass dome Hals waited impatiently.

Wiljon Kar was dragging a steel cable, and across his shoulder there dangled a sack hastily packed.

As Hals again adjusted the radio phones Wiljon Kar fastened the ends of the cable to the belts of their space suits. From the bag he pulled out two squares of Venusite plates, two atomic blast torches and a set of hand grapples such as are used for emergency repairs upon a transport when in flight.

"Ready," Hals' deep voice boomed with hot enthusiasm. He bent forward slightly, imitating the engineer's position.

"Shove off!"

Pushing hard, with his feet firmly against the hull, Wiljon Kar dove head foremost toward the greenish ball. At once Hals did likewise. The linking cable curved in a slight arc as both bodies sailed smoothly across the intervening black nothingness of space.

The distance was not great, and with both the W62 and the mystery ship from Fomalhaut motionless it was merely a matter of aim. For tense, dragging moments the two spacemen seemed to hang in the vastness of space. They sensed nothing of motion. Only by the slow enlargement of the greenish mass could they determine any movement at all.

Wiljon Kar had sighted along his up-raised arm as he dove. Everything depended upon whether they would ultimately touch substance again. Not until the greenish mass seemed to spread out and creep upon them could either Earthman breathe freely. But they were making it.

A scant body length from the tip of the ball opposite the glowing end, the grappling hook in Wiljon Kar's extended hands sank into the soft, rubbery stuff of the ball. With a vicious twist the engineer changed the course of his flight so that his head moved slowly along the contour of the ball toward the glowing end. At the cable's length behind him followed Hals.

There was no time for fear. Indeed, Wiljon Kar felt as if he were enduring some strangely wondrous dream. The mass of the thing was great. Fully ten times that of the W62. Edging along slowly, the grappling hook feeling along carefully as he pulled himself forward, he rounded the extreme diameter of the ball and then halted abruptly.

Suspended beneath the greenish mass and comprising fully a third of the

sphere there was a shiplike structure of metal. Midway upon this metal cab extended a row of fluorescent disks, each approximately the width of a man's body.

Yet, even as he stared, Wiljon Kar sensed the subtle flow of energy from the disks. Fully a score of them focused their weird rays to a convergence some distance from the ship. From this point a narrow beam of light stretched beyond to the black mass which was the W62.

A tugging upon the cable announced Hals' approach. Wiljon Kar felt the mechanic's hooked gloves fumbling about his own space cap. Now the faint flow of energy from Hals' radio phone caused him to realize how cold he was. The fearful realization charged through his blood. He must hurry. He was slowly freezing to death. And off there in the dark, lifeless W62 were the other three faithful ones of the crew.

Hals' whisper cut sharply upon slowly numbing consciousness.

"To the left—see it, Wiljon Kar? It looks like a port."

Wiljon Kar's gaze became fixed upon the curious irregularity. Upon this side of the strange, glowing disks the ship was as smooth as glass. Beyond the disks the remaining mass of the thing tapered to a single vast torplike protuberance.

THEY had to move slowly and cautiously across the slick surface. The slightest jar would send them spinning helplessly in space. Eagerly Wiljon Kar's clawing glove tips grasped the slight rectangular projection. He was feeling over the smooth metal, seeking vainly to touch some releasing lever. His body felt stiff. There was no longer any sensation in his hands and feet.

Hals, too, worked upon the plate. The terrible fear arose that possibly, after all, this was no port at all. Now the mechanic was swinging his blast

torch into line. Wiljon Kar strained to align his own torch so that the two might eat into the hard metal quickly. Every move that he made was slow. His body responded with deadening fatigue. How much longer could he endure?

This searing flame of the torches blinded him. By contrast, the blackness of space seemed a thick, impenetrable substance. Even the distant sparks of the stars were lost from view. The Sun, which had been scarcely more than a candle in the eternal night, was lost.

Wiljon Kar felt utterly alone. Earth was scarcely more than the memory of a pleasant dream. For a moment, he must have lost consciousness. Then the sharp cry from Hals beat through the radio phone.

"We're through the stuff—shut off the power."

Throughout Wiljon Kar's frozen body seared a new consciousness. He felt oddly alert; his brain was feverishly clear. In a gallant upthrust of will, the strong stuff of his being exerted itself in a last supreme effort.

Beneath them the aperture opened to a vast room. Yellowish light, seemingly emanating from the stuff of the walls, made everything as bright as an Earth day at noon. Swiftly, Wiljon Kar poised above the opening. He leaped.

As his body slowly descended into the room he grasped the Venusite plate, holding it before him as a shield. Should the strange invaders attempt to strike them down the Venusite, and absolute ray reflector, would serve to protect them. In his other hand he still carried the blasting torch.

A peculiar shudder shook the room, and through the thick soles of his boots needle points of energy tingled sharply. The walls of the room grew brilliant, the stuff of which they were composed seeming to flow as if a boiling liquid were restrained by some perfectly trans-

parent shell. Now Hals was beside him, pressing his huge back against Wiljon Kar's.

"They're getting closer!" Hals exclaimed. "What to do—quick!"

Wiljon Kar poised alertly. Comforting warmth surged through his body. He felt suddenly free. And Hals' voice had rung loudly in the radio phone! In that brief moment of realization Wiljon Kar understood that the imprisoned energy of the batteries within the suit had been liberated. Whatever the weird control these things commanded, it was at least limited within their own ship.

But the walls were closing in upon them. The fearsome stuff boiled furiously now and the light grew dazzlingly white. Yet even before a plan could be formulated Hals swung up his blasting torch, pressed the lever down to full power. The hot, searing flame leaped to the creeping wall. Hals swerved the torch wildly.

Glaring blue-white sparks of tortured energy exploded in blinding sheets of flame. The room quivered, and charging bolts of fiery energy burned from the floor to the thick soles of their boots whenever a foot was lifted. Within the space suits the Earthmen dripped perspiration. The heat was becoming suffocating. Yet the horrible advance of the walls had ceased.

Wiljon Kar was firing his own torch now. Twin beams of atom-destroying flame tore at the wall. The strange, flowing matter swirled in fantastic currents. Then, abruptly, from ceiling to floor, the wall ripped apart. Hals had observed it first. Speedily, he grasped the engineer's arm. They hurled their bodies through the aperture.

HALS had stopped so abruptly that Wiljon Kar ran into him.

"It's dark here—blacker than a Plutonian eclipse."

"The wall closed again. We jumped out just in time." Wiljon Kar was

feeling his way in the darkness. The flooring sloped downward in a spiral-like curve. By extending both arms he could touch metallic hardness upon each side.

They moved forward cautiously now. The place seemed to be some vast tube rather than a hall. In the bulky space suits they moved with uncertain steps, so sharp was the decline.

"It's wider now," Wiljon Kar was saying. And then, a little farther on, he suddenly checked their movement. "This must be a room. The left wall curves away at nearly a right angle here. And we're somewhere near the core of the metal part of the ship.

"What's that?" Hals whispered tensely and moved near so that his own shoulder touched Wiljon Kar's.

"I see nothing."

"Straight ahead there—ten yards or so—there's a round, gray thing."

"Steady, Hals." Wiljon Kar placed himself between the mechanic and the ghostly gray sphere. He could see it clearly now. The thing seemed to be building up energy within itself. Did he imagine it or was there really a soft pulsation of energy emanating from the ball? It was difficult to determine through the bulky space suit.

Step by step, Wiljon Kar approached the thing. The sphere grew distinct, becoming now a deep purple and now glowing until the whole of the vast chamber became suffused with the soft, red-violet light. The sphere itself was no larger than a man's head and hung motionless and unsupported several feet above the somber gray metal of the floor.

Hals had grasped his elbow. "Shall I blast it?"

Wiljon Kar gestured for Hals to restrain his fighting impulse. The master engineer's gaze was riveted steadily upon the glowing sphere. He seemed scarcely to breathe at all and every cell

in his body was attuned to the intensity of his concentration.

Slowly, now, he raised the blasting torch and deliberately aimed it at the very center of the sphere. Instantly, the strange thing assumed a weird movement. A tentacle of energy burned upward to a suddenly charged bulb upon the domed ceiling high above. Simultaneously Wiljon Kar experienced a tingling along the arm which held the torch. Instinctively his fingers tightened upon the firing stud. Yet there came no crash of flame. The torch had become a lifeless club.

Hals, seeing the maneuver, groaned.

"Too late—we could have struck—but now——"

"Silence." Wiljon Kar commanded sharply. He was adjusting the radio phone so that his voice might be broadcasted beyond the suit. Then, drawing a deep breath and eyeing the sphere squarely, he shouted: "Who are you? Stranger from Fomalhaut—in the name of the council, I——"

Wiljon Kar's throat constricted painfully. He could not continue. The sphere had become viciously alive. Its fiery tentacles reached forth to encircle the daring Earthmen. Wiljon Kar writhed as the keen lashes cut into his body. He felt himself lifted bodily from the floor. Now he fell before the sphere, twisting and turning as he sought vainly to escape the vengeful lashes.

With a bull roar the maddened Hals went berserk. Waving his lifeless torch in a war club swing he hurled himself with wild fury toward the menacing ball.

Wiljon Kar attempted to get to his feet again. The sting of the lashes half-blinded him with searing pain. He was crying to Hals. But the crazed mechanic was beyond hearing commands now. His voice roared a battle cry, the blood of Viking ancestors churning his huge body to a warrior's mad-

ness. To Hals this was death, and death, to such as he, meant the final glorious flourish of a true fighting man.

He charged straight toward the sphere. With all the strength of his mighty arms, Hals crashed the heavy torch down upon the sphere.

THE ROOM became brilliant with violet flares. The torch had sunk scant inches into the strange stuff and had not budged it from its position. Now the searing tentacles lashed a hundred whiplike flames about the room. The stinging cuts brought a maddened roar from Hals, yet he did not go down.

Bracing his feet firmly he lifted the torch—crashed it again. Still the fiery tentacles whipped in merciless fury. Hals spat crazed curses from between clenched teeth. But still he fought. Again and again the war club beat down upon the sphere.

Wiljon Kar had scrambled to his feet. He was gasping for breath. Hot tears blurred his vision for the moment. The roar of Hals' enraged curses hammered fiercely upon his brain.

He could see clearly now. The lightning flashes of the sphere's energy tentacles illuminated the gruesome place with glaring brilliancy. The wall beyond the sphere was irregular with countless rows of knoblike extensions.

Running swiftly, Wiljon Kar skirted the room. Holding his grappling hook securely he swung his way up the wall. His eyes held to the gleaming bulb which was just above the sphere. It glowed hotly, sending a steady flow of energy to the madly flailing sphere just below.

Now, upon the topmost row of the knobs, Wiljon Kar braced himself. With one hand he gripped his torch firmly. Tensing himself, he swung out. His body shot straight toward the gleaming disk. Frantically, viciously he struck. The torch crashed through a swishing arc squarely into the disk.

Even as he fell, Wiljon Kar felt his body tingle from the explosion. In a sudden flare of blinding flame the disk seemed to tear itself from the hard metal of the wall.

"Hals!" Wiljon Kar cried out as he struck the floor. He rolled dizzily and then lay still, for a moment, while his stunned senses held rigidly. Then silence and darkness seemed to bury him with impenetrable vastness.

Hals was tugging at his suit, calling to him. Oddly, the mechanic's voice was weak and choked as he struggled to breathe steadily.

"Wiljon Kar," Hals was shaking him. "Are you hurt? Wiljon Kar!"

"But the sphere!" Wiljon Kar struggled to his feet awkwardly. Hals, his huge body quivering from his fierce exertion, stood beside him, one arm across his shoulders. Grimly, Hals pointed.

There before them, quivering in flabby helplessness, lay the weirdly glowing stuff which had been the sphere. The shapeless mass seemed to writhe and quaver in some fantastic death struggle of its kind.

"But what did it? Hals, your strength——"

"No!" Hals spoke up quickly. "When you smashed that thing up there it took the stuffing out of the damned ball, so when I smacked him down the last time he stayed down. But it's getting dark again—the thing's dying. Collusus! It was alive—whatever it was—but it was a being—a——"

Wiljon Kar shook himself from the trance which had held his horrified gaze upon the slowly fading mass. "Quick, Hals. We must get to the W62—get them in here—they're freezing, Hals."

Suddenly their radio phones roared with sound "Wiljon Kar! Hals! Are you here? Stand by for the flying engineers—but answer me if you be yet alive—Wiljon Kar!"

Hals' gasping voice choked out in glorious relief.

"It's Mardico! Righto, you old buzzard of space—Mardico—are you aboard this blasted hell ship? Mardico—we're coming up—we've got the enemy——"

"Hals"—Mardico's voice boomed forth with cheering enthusiasm—"you oversized hunk of blond dumbness and bless your stout heart, I says, so tickled am I to hear the ugly rumble of your voice. Come on up!"

Old Mardico's stumbling hulk was stamping down the spiral hall when they sighted him. Immediately, the old guardsman halted, drew himself to attention and saluted in grandiose style. But the pounding of Hals's big fist upon his back broke down his formality.

"By the glory of the triple sun," Mardico's voice cracked and wheezed with excitement. "But such a lot as you are that you finish a fight without saving even so much as one blow for your faithful comrade, blast your souls. None the less 'twas a glorious experience when all of a sudden the old W62 flew into light and the blessed energy of her reserves shot through her freezing hulk."

Wiljon Kar interrupted sharply: "But Prock, is he——"

"Prock's coming round, sir, and Mechanic Twombly is close beside him. 'Tis I alone who left the ship as soon as the blessed power returned. Ah, indeed, 'tis a sorrowful day for me that this old Mardico could not come in time to aid you."

"Mardico"—Hals grasped the old fellow's shoulder, shook him vigorously—"you're drunk!"

"Drunk? Mardico drunk! Indeed you pour insults upon this anguished heart. Truly, I swear to only the slightest portion—barely enough to thaw out the frozen blood streams of this old body."

Wiljon Kar seemed to relax at the jovial banter. At his command, Hals went with Mardico back to the W62.

Wiljon Kar remained in order to gather the needed information for the report to the council.

IN MAJESTIC SWERVES the W62, towing the strange ship of space, dropped gradually down to the twilight city of Omega upon Pluto. With the delivery of the trailing cargo, the special detail of the flying engineers would be completed. To the elderly Prock fell the honor of flashing the report Earthward.

Blue flares flashed to Jupiter, Neptune, Luna and ultimately to the council headquarters at the international city of Toronto, planet, Earth.

"For a distance of twenty-four light years," Prock continued the flash, "this lone energy entity from a planet of the star Fomalhaut blasted his great engine of space. This being itself was but the brain stuff of some amazingly advanced life form upon that planet. Obviously his knowledge of science, particularly his understanding of the physics of electricity far exceeded that of any Earthly intelligence.

"We have delivered the space ship from Fomalhaut and the remains of the strange being which directed it to Commander Ackermann, city of Omega, planet, Pluto. A detailed report is being delivered via the regular Interplanetary Transport System. Signed, Prock, M. E. of the flying engineers."

Having completed the report Prock turned wearily to Wiljon Kar.

"Well"—he grinned and ran his bony old hands through the thinning white hair—"that's another job done. Hope they'll let us rest a bit."

"They'll have to, Prock," Wiljon Kar replied. "I just saw Mardico, Hals, and Twombly headed for the Space-man's Garden of Rest a couple of hours' ago—and with the quantity of roulek already under their tough hides it'll be a good month before they'll be sober enough to know their own names."

STRANGE CITY

by Warner Van Lorne



He caught the man, tossed him into the faces of the others—then—

WHEN consciousness began to return, Tom realized he was running. A terrible monster pursued him, and every few feet he threw himself to the floor as one of the legs passed over him. Passing, a thou-

*The science was too ancient for the memory—
too advanced for the understanding—so it died*



sand needles pushed through him as his brain was torn and twisted.

It took a minute for the thought to sink in—he must run! Running was the only escape! The farther he ran the more space between the passing of

legs. They were higher above him as well, and he gradually reached the point where his brain only fogged for a fleeting second, then cleared again.

When several minutes passed without having to duck for the legs it seeped

into his dulled brain that danger was past! He could rest! Dropping on the floor with relaxation from utter exhaustion—he slept.

Hours later he awoke. How many hours he never knew, but slowly returning consciousness drove the fact he had slept for a long time. His dreams had been queer, and as he lay enjoying the lethargy of slow awakening, they struck him as funny. He laughed. The shaking motion made the floor seem harder, and, suddenly, his eyes snapped open as it became a certainty. He was not in bed!

Above, as far as his eyes could reach, was a network like a giant spider web. This was peculiar, and he lay several minutes examining it carefully. It looked like metal girders, but so far above the distance could hardly be imagined, and seeming to stretch endlessly. There was no end in sight, and turning his head slightly the same picture of fine lacing met his view, only now a larger strand was visible.

Suddenly, he sat up! Then he jumped to his feet! Shaking his head and slowly blinking his eyes, he saw the same things. The monster in his dream was a great mechanical rotor turning on a gigantic axis. Although he was a thousand feet from the tip of the blades, there was a faint prickle every time one turned toward him. But instead of the terrible sensation he remembered, there was a slightly exhilarating effect.

Twice shutting his eyes he tried to wake up where he belonged, tried to remember where he had been last, and the little shop where he experimented came to mind. As he went over the last events they seemed far away, a vast distance. The way he felt traveling in Europe, with home far away, and a glad feeling as he finally sailed toward America. Now the feeling was exaggerated, the distance much greater; such

distance was hard to grasp, and far from pleasant.

The picture of the little laboratory was very clear: the perfect equipment, with every type of television and radio around the walls. The most powerful sets known could bring in stations so faint they were rated very low.

He was trying a new type of wave that would reach beyond the uttermost limits of knowledge, and had tried for several days to pick up signals that had been reported, rumored to come from another planet. The codes were unknown and at times there was a voice, speaking words no one could decipher. The new wave, he believed, would reach out and pick up things ungessed in standard radio work.

He remembered the beginning of signals, a vague image coming over the new wave. From that point there was a long lapse of time, he knew; but he had no way of telling how long. It might have been hours and it might have been days. This dream didn't fit in at all. He felt wide awake. He thought of his watch and raised his wrist to look.

There was no watch there; and glancing down he found he was completely naked. His mind raced—things were as unreal as a few minutes before. He pinched himself until small black-and-blue welts raised where he bruised the flesh. He was not dreaming, but awake.

WHERE? The question burned, and he knew fear. He knew he was in an alien place, far from anything known to exist, with no one that could help. He was utterly and helplessly alone.

There was the gigantic rotor he had fled from, so exhausted he fell asleep with his brain numbed by the energy the blades threw off. He had thought it some kind of animal, and that he must escape reach of the legs! The curiosity of the scientist began to overcome un-

reasoning fear as he watched the giant blades swing slowly around.

He stood a thousand feet from the tips, yet could feel the energy in each of those vast pieces of metal as they swung past. They were beyond imagination.

From tip to center axis they stretched a full half mile, and must measure over a mile from tip to tip. Each blade, alive, as vibrant energy danced and played along the surface, emanating in all directions.

The rotor was in the center of a room so vast it was almost beyond his comprehension. The shaft which swung the blades slowly around was several hundred feet in diameter, and from the distance heavy cables were led down from the nine blades at the top. Everything looked, to Tom Corbin, as if he were suddenly the size of a small insect. Cold sweat poured down his body as the change in things and their lack of proportion became apparent.

He stood in a room so vast a small city could be housed within and still have room to spare. Slowly turning his head, he found other machines around the walls, all dwarfed by the central rotor. A hum so smooth it had no vibration brought a sigh of admiration for men who built such perfect working machines.

It was not over a quarter of a mile to the wall of the building and hundreds of smaller machines, standing row after row, gave hope that men would be found near them.

The main machines were dynamos and converters. But what beautiful things: silent, spinning armatures in the outside casings, spark gaps that automatically increased or lessened. They ranged in size from a few feet high to those one hundred and fifty and more. As he watched some would stop as others started of their own accord, so automatic it gave the impression of men tending them unseen.

A cabinet to the left attracted his attention and he wandered that way. The surface appeared like glass, but there was a tint to the clear wall never seen in ordinary glass. It had warmth with an intangible old-rose coloring. It was color, yet did not retard the clearness of the panel in any way. But the inside drew his attention. It contained control boards for all machines in the room.

It stood thirty feet high by sixty square, with row after row of switches opening and closing constantly. Watching them closely, Tom could see they cut out certain machines as others were thrown into a giant circuit that centered all action.

The energy within that immense box was inconceivable. It could come only from a source as great as the rotor in the center of the building. But where could the energy be gathered from? Millions upon millions of volts—enough light and power for the civilized world! What could be done with it? Whoever constructed such a planet must have enormous use for energy.

When he turned away from a scene more interesting than any play or movie, it was because a pang, that recurred so often it couldn't be denied, told him he hadn't eaten for hours. He was hungrier than he had ever been before. Life hadn't taught him to go without food for any length of time, and now his stomach was crying for something to work on.

A MEAL became a very important thing as he started out to find some one, any one! The outside walls showed no sign of an opening for a long way, and he was beginning to despair when a small doorway appeared in the distance. He forgot to go slow and see that no one caught him in his nakedness.

The metal door refused to give as the bar swung to the side. This was disconcerting and he gave it a jerk that should have opened it. Instead, he

landed on his back several feet away, with the door still in his hand. The door had pulled out by the hinges!

The metal was very light, and Tom got back to his feet with a queer sensation. The hinges had ripped out of the metal casing as though under terrific strain; and it was with mixed feeling that he walked back to the doorway.

The distance he landed from the door was astounding without considering the force of ripping the metal apart to get it open. The door had been locked on the other side, and lock as well as hinges hung a wreck in his hand. For a minute, this strange thing held him fascinated, before stepping through the opening into a room about six feet square with no sign of an opening beyond.

As he stood examining the walls for some opening beyond, the sensation of moving became strong. Glancing back toward the engine room he found a blank wall.

The sensation of speed increased by the second as he started to throw his weight against the partition. Thinking better of it as he remembered the metal door, he put his hand against the side and pushed tentatively. This wall was stronger and, after testing it for a minute, he pressed his whole weight against it.

The wall bulged where his hands pressed and the car began to lurch with a grating sound. When he was thrown clear of the side by the jerk of the car, the metal sprang back and the car picked up speed again. The certainty of speed made him hesitate to break out. Stalling this strange conveyance, he would be in a worse predicament than to let it travel and see what the result would be.

The air became unpleasantly hot after several minutes of the terrific speed. The friction was heating the air to a high temperature. Touching one of the walls it burned his hand, and the feel-

ing came over him that he would be burned to a crisp if the trip continued long. The floor was insulated, for it stayed fairly cool. Moving his feet kept them from getting uncomfortably hot. The air was getting too hot to breathe, before the car began to slacken speed.

The speed lessened for several minutes before the car came to a halt. The trip seemed to take an hour. After a minute of standing, there was a grating sound at the partition, but it didn't open. Placing his hand on the wall to find the source, a slight vibration shook it.

It only took a moment for the reason to become apparent. The metal couldn't be moved by the motor operating it, because it was bent. Realizing he was imprisoned, Tom put both hands against the surface, trying the panel first one way then the other until a crack appeared at the edge. Forcing his fingers through, it took only a minute to slide the panel far enough to get through, despite the fact that the metal was still hot.

Once on the outside, he pushed against the plate and was gratified to see the metal straighten to a semblance of its former shape. The motor, pulling from some place out of sight, slowly drew it back to fit against the surface with only a slight variation to show it was ever out of shape. This was a relief. Damage left behind wouldn't set very well with the beings who owned the car.

He turned his back to the car and faced a small room with clothing hung on the wall, like the dressing room of a masquerade ball. Gaudy uniforms hung from hooks, complete with long swords. But he was still naked and it would be better to meet people dressed in one of these than undressed!

Looking over the clothing, he found one suit about the right size. It was a little loose but made him feel more

like a man. A doorway in the far wall drew his attention, while fastening the last of countless buttons, for the faint sound of voices came drifting on an air current.

II.

HE STARTED FORWARD, then hesitated. A feeling of uneasiness crept over him, and he took down the sword that hung with the uniform, fastening the belt around his waist.

He tried the steel to be sure it was not soft material like the door he pulled apart. The metal had a greenish tint but seemed of excellent quality.

The passage turned a few feet beyond the door, and as he went forward he watched carefully. Looking around the turn before stepping out, he drew back.

A room full of men, but men of a strange race, were gathered around a table playing some game. He could at least look them over before they saw him.

Their uniforms were similar but not like the one he had helped himself to, but the men drew attention. They had the same features as any of the human race, but the color of their skin was startling: a brilliant pink! It was not the color of a girl's blush, but the color of a fresh burn, with no counterpart in an ordinary complexion. It was a distinct color of its own. Yet they looked like so many men dressed for a masquerade ball. The color was not displeasing, but looked as if they were never out in the sun; always lived in a hothouse. They carried swords at their sides, worn enough on the hilt to know they were not carried for appearance.

When one of them glanced up, his startled exclamation brought the others to their feet and Tom faced a row of drawn swords. The men filled the room from wall to wall, silently watching as

he stepped around the corner into full view. There was a minute of silence. Then Tom managed to say "hello," although knowing they couldn't understand from the few words spoken while he listened.

They stood stupefied a minute longer before one of them could manage a word. Tom listened respectfully to all the man said, but it sounded different from anything he had ever heard. Shaking his head he tried to show them he was friendly. He stepped forward holding out his hand but they only raised their swords higher. Finding this didn't work he tried rubbing his stomach and pointing to his mouth to show he was hungry, but they still stood and stared.

After a minute, the man tried again. It sounded like a different tongue, and he spoke slowly. Tom shook his head.

A puzzled frown appeared this time and a fleeting look of distrust. He gave an order and the men dropped their swords and came toward him. His own sword, in the belt at his side, was useless, so he waited to see what they wanted. But when one of them grabbed him around the legs it was too much. He wanted to be friendly and they tried to knock him down.

Reaching down he caught hold of the man at his legs, tossing him in the face of the others before they could get hold of him. They were knocked back ten feet as they fell like tenpins.

This sobered them and, scrambling for their swords, they kept back as far as possible from this wild man. Wonder and a little awe showed in their faces now. They didn't seem anxious to try again. As he faced them across the room Tom thought of the sword at his side and wasted no time drawing it. Since they weren't friendly, he wasn't going to be caught napping.

The leader picked out three men and the four came slowly forward with drawn swords. He smiled to think they

had more respect than when trying to capture him a moment before. The leader would be the worst to face and he watched him carefully.

TOM was in a tight spot. He didn't want to hurt them as he needed friends. He had no quarrel with them. It was not his fault he faced them now, but he didn't intend to be cut up if he could help it.

When only a few feet remained, they rushed. It was all he could do to keep from running them through as he knocked their blades aside. Swinging furiously the blade of the leader was the first he touched. His blade was traveling so fast when they met that the other sword was thrown ten feet away. The next one broke short as the other two were knocked out of the men's hands.

They retreated at this, talking amongst themselves. The leader came forward and spoke again. Tom didn't understand, but knew he was asking a question. Later he found it was lucky, as an answer would probably have cost his life for being a liar.

The man was very grave as he asked, "Who are you that wear the clothes of a god and fight like fifty men?" His face fell as Tom shook his head, but he understood the smile. That meant friendliness, and as none were hurt badly they put away their swords. When Tom replaced his they seemed very much relieved. Beckoning him to follow they entered a passage on the opposite side.

With some misgiving he followed, but they showed good will by going ahead. After a minute, the leader dropped back to walk by his side. He couldn't fail to admire the tremendous courage it must have taken.

As they walked, the man timidly reached out to feel the muscle in Tom's arm. The wonder appearing in his face was eloquent.

Tom thought it a friendly gesture so he reached over and did the same, but was sorry when the man winced and bit his lip to keep from crying out. How it must have hurt, although unintentionally! The man's arm was soft and his thumb sank in an inch before he realized he could break it with one hand.

The feeling that everything was wrong returned as he tried to show the man he was sorry. The flesh of these people was very tender, more like a new-born baby than full-grown men. The man he tossed across the room was extremely light as well, seeming to weigh no more than twenty pounds.

As they walked, Tom wondered what material the floor was made of. Instead of the hard feeling of stone it felt springy as though covered with carpet. It gave a bouncing sensation rather pleasant to walk on. The man couldn't keep his hands off Tom and kept reaching out to feel of his arms. They seemed a great wonder to him.

Passing branch after branch in the tunnel, they approached stronger light as it widened at the entrance of a room that would hold a thousand people without crowding. Everything was of stone. There was no sign of the metal that appeared in the engine room, anywhere in sight. The benches were worn in hollows and at every door deep grooves showed the passing of time. The room had been here a long time. It was torture to think he could ask about nothing but had to content himself with sign language.

The leader of the guard, or "General" as he nicknamed him, had taken a liking to him and spent his time peering into his face and examining him from head to foot.

The room they were in contained a hundred more men in uniform similar to the others and they gathered around the newcomers, pointing and asking excited questions. It struck Tom so funny

he couldn't help smiling, which seemed to embarrass them, but only for a minute.

The wonder in their faces made Tom pick up the General and hold him above his head with one hand, to show he was actually a man. A shout went up from the throng as they drew their swords menacingly.

Too late, he realized the mistake, but had to see it through, so he set the man on his shoulder and stood his ground. The man in his hands hadn't said a word and his face masked his feelings. From the action of the others in the room he was a man of importance and Tom's mind raced for a way of straightening the situation: out.

Setting him on his feet carefully, he bowed, then pulling the sword from his scabbard handed it over hilt first. This gave the right impression and the tension of a moment before melted away.

HIS NEW FRIEND took the sword very seriously, saying a few words before handing it back. Tom breathed easier as the men lost their hostile look and resumed conversation. Now the General took him by the arm, as they walked slowly across the room to sit at a small table.

Beckoning to one of the men he sent him on an errand, after several minutes of conversation. The rest of the men in the room kept a respectful distance but talked excitedly as they glanced in his direction.

When they had been waiting several minutes, he called the General's attention, making motions to show he was hungry. It was quite a job to make the man understand, but when he did two men went hurrying away to do his bidding. In a short time they were back with several girls evidently of a servant class, carrying trays.

They had cloths wrapped around them in place of clothes and were afraid of coming close to the stranger until

the general spoke to them. Then they approached to serve the dishes. They were a little reassured when Tom smiled, but still glad to keep back when they finished their duties.

They carried food of a dozen kinds, and all smelled delicious at the moment. None was familiar, and he tasted each before deciding upon a food that was very pleasant, tasting like mushrooms with some delicate meat added.

The girl who tended the table handed him a piece of metal shaped like an oyster shell and it took several minutes to decide what to do with it. One edge was sharpened to cut with, and if the edges were pressed it hollowed like a spoon. After a little practice it replaced knife, fork, and spoon very nicely.

While eating, the serving girls caught his attention. Their coloring was the same as the men in the room but they seemed chiseled out of marble, standing perfectly still until he wanted something, when the head girl would wait on him. The features of each were so perfect he forgot to eat, lost in admiration, until the General motioned him to hurry.

As he finished the meal, the messenger returned and bowed slightly before speaking. Tom was motioned to follow again as they left through a side door.

Entering a car that rattled and shook as it rose, the party ascended story after story. The car rose fully a thousand feet and all the way it made Tom nervous listening to the straining as it squeaked to the top.

The passages at the upper level were brilliantly lighted and as they walked along people stopped to stare. Hundreds were wandering along as if walking were the only occupation. They were dressed in brilliant clothes and the women's dress vied with the men's in color. Everything was like a giant Mardi gras.

No one seemed seriously occupied. The women did not appear as beautiful as the servant girls, being thinner and much more anæmic looking. They looked cultured, but showed a complete lack of physical exercise.

A little farther they entered a doorway, where Tom found himself in another car similar to the one that brought him from the engine room. But this was also in a bad state of repair and jerked along its track which felt worn to the breaking point. Tom knew his nerves wouldn't stand much more racking when they came to a halt.

THE GENERAL took his arm as they passed row after row of standing guards. Swords were presented and the feeling of importance began to creep over him. Why they should honor him as a perfect stranger was beyond understanding. Tom watched everything they passed, closely, and was surprised to see light bulbs broken every little way, left as they were in the sockets, and not replaced.

The lack of repair was terrible amongst such perfect machinery. Every bit of mechanical equipment they passed was far better than anything Tom had ever seen, but badly in need of work. Things were so different from the engine room where everything was in perfect shape.

He didn't have long to think about it before they entered a doorway into a vast chamber. At the other end a man sat on a high chair from which he could see well over the heads of others in the room. He knew they had entered a throne room and he was being taken before a ruler. Every guard in the party flattened himself on the floor except the General who bent one knee. To follow suit, seemed the thing to do.

The ruler was far from pleased that he didn't join the men on the floor but bending his knee was as far as Tom would go. When he saw the expression

on the man's face he was sorry he'd done that.

They were called forward and stood for several minutes while the "Ruler" talked to the General. Tom stood through an examination lasting several minutes before the man was satisfied and turning to the General spoke a few more words.

The General called over one of the guards, whose knees shook as he came forward, and motioned for Tom to lift him. He was the biggest man in the group and Tom had some misgiving as to whether he could handle him, but the man didn't weigh over twenty pounds as he held him over his head. Seeing it pleased the Ruler he tossed him in the air about twenty feet, and, while the men in the room groaned, caught him as easily as a rubber ball.

When set back on his feet the man shook like a leaf and had lost all the color he ever had. The look on the faces made Tom laugh and suddenly reach forward to the block of stone the throne stood on, raising it slightly. The stone would weigh several tons if as heavy as he was used to, but this only required a little exertion.

The Ruler jumped as the stone slanted but was soon all smiles again as Tom tried to talk to him. After several fruitless attempts he gave up, while Tom tried every language he had an inkling of. He knew a little French, German and Spanish but none were understood.

The Ruler beckoned to him, and, when he came closer, felt of his arm. This seemed the strangest of all and the hardness of his muscles held the man in awe. Several times he let go, then reached out again, trying to believe it was real and not imaginary. When Tom flexed his muscle he was delighted, and had him do it several times.

As Tom was led away he could hear the gradual swelling conversation in the room. They would have plenty to talk about for a long time to come!

The General was quite friendly, and they walked arm in arm through the passage. Tom tried to find the reason for the lights not being replaced. As they passed objects Tom named them in English while the General gave him the name in his own tongue. Before they reached their destination the names of twenty objects were understandable, and several more he was not quite sure of.

III.

THEY finally reached the apartment assigned to him, and, as he examined it, three of the girls who brought his dinner in the lower chamber, entered. The one who served the food was brought forward by the General and presented to Tom. It was hard to understand what was meant but he realized she was being given to him, and the fact they were slaves became a certainty.

When she started to kiss the floor at his feet he grabbed her by the shoulders, jerking her erect. He was sorry a minute later; he had forgotten his strength and it shook her up quite a bit. His action seemed a complete surprise to her as well as the General as she backed away cringing.

Later he learned it was a means of showing displeasure to stop their obeisance and he hurt the girl's feelings more than he hurt her physically. The General tried to replace her with one of the other girls and it was hard to persuade him he hadn't shown displeasure.

Tom called the girl back and stroked her head, but as she bent toward the floor he stopped her. He wouldn't have that, and the easiest way was to stop it in the beginning. Although the girl had a puzzled look, adoration shone in her eyes, and from that moment she was never out of his sight.

The other girls came forward and the

General made it known they were to serve, but they didn't try to kiss the floor. When he was left alone he took the head girl by the arm, motioning for her to show him around. She seemed embarrassed to have him touch her but she obeyed. It was not for her to question anything the master did.

The apartment had outside windows and she took him to look out. When he pulled back the curtain a faint glow appeared and in a minute he was gazing at the strangest scene man ever saw.

A purple light covered the whole sky. The window was slightly above the ground or possibly he was looking at gardens on the roof of the building. But it was a mile in extent. Everything had the strange lack of deep color the people showed and though the growth of plant life was very thick it looked sickly and pale. The sky was a purple glow that started nowhere and ended the same.

Trying to show the girl the shape of a sun and the light from it was quite a task, but he finally made her understand he was asking about a big light in the sky. After considerable time he found there was no other light at any time than the purple glow before him. The reason for the people being so pale became apparent, with no stronger light than a glow equal to very early dawn on Earth.

When they returned to the room for sleeping, Tom had her name every object he could find. This went on for a long time and he wouldn't have been satisfied then, if she had been able to hide a yawn.

He realized everything was still. The rest of the building had throbbed with life earlier. Try as he might he couldn't get her out of the room, so at last he started to go to bed with his clothes on. This didn't suit her in the least and she tried taking them off, but he was adamant. Evidently the men had girl servants who waited on them at all

times, as this girl was very much hurt when he wouldn't let her put him to bed.

It was with a very uncomfortable feeling that he lay down on the pad in the corner and fell asleep.

When he awoke the first thing that caught his eye was the cloth the girl had around her the night before, hung on a rack at the side of the room. He could just see her bare arm lying on the floor at the foot of his bed. She had spent the rest time on the stone at his feet, and removed her cloth to sleep.

Tom found himself more embarrassed than he ever remembered, and was in a quandary as to what to do. He didn't dare get out of bed. She might wake up and chase him around without bothering to put anything on. He soon found that thought of propriety between the masters and slaves didn't exist, were no more considered than animal and master. Although amongst people of the same class the strictest rules were followed.

He decided to make enough noise to wake her up, then turn his face to the wall while she donned her robe, although it was not much more than a bath towel thrown around her. The first time he gave a little cough she landed on the floor beside his bed, to wait upon him.

An argument started shortly when she tried to get him to take a bath. The water poured constantly through a large pool adjoining the room and she did her best to get him to take a bath while she held a towel and what looked like peculiar soap.

This was too much and after considerable motioning Tom got her to leave the room. It was not without a hurt look, and lack of understanding, that she withdrew. While lying in the pool he could see a stool a short way from him with a clean uniform laid out.

As he came out of the water and started toward the clothes on the chair he jumped. The girl had appeared be-

hind him and started to rub down his back. This time he gave up trying to change their customs to suit himself. From then on he put up with the girl servant at all the occasions he was used to privacy and it was not long before he became accustomed to her company and paid no more attention to it.

THE GIRL had an appeal of her own, and as time went by he was drawn more and more to her society. For the first time in his life he watched for the slightest movement of a girl. He thought he was immune but this time he had become very seriously interested.

Several days passed with the only other company a call from the General every day, or between the times he slept, as they ate only one meal. The Ruler was allowing him to learn the language before trying to converse again. As time passed he mastered one word after another until he had a faint grasp of conversation, from then on learning fast.

The girl seemed tireless; and he spent hour after hour talking to her. Never for more than five minutes at a time, night or day, was she away from him and the thought came that he would be lost if he gave up her company. Before he had known her it was different. Now that she had become a part of his daily life it would be like tearing away part of himself.

Their conversation covered every part of life in Borid, as the city was called. But he couldn't find what country he was in. Every question asked about the location of Borid only brought a puzzled expression.

He no longer tried to explain how he came. He didn't know. But he did tell about some of the life he led before coming. It seemed as marvelous to them as this country did to him, but he failed to understand the reason for there being no sun.

Time was not a set thing, but varied,

and though the masters slept at certain times it was because the Ruler set aside every so often for sleep. The time was rung on bells throughout the city whenever he happened to get sleepy. They had no time.

The girls were enslaved from childhood, he learned; had been slaves for so many generations the time was lost in history. Originally they had been captured from a distant city, the name of which had been forgotten, as generations lived and died without communication. With the gods had ended all communication.

The gods were the builders of the great city, with lighting systems and machines that carried on their work through the ages. They had been gone for untold time and still the machines went on untended. When one went wrong it was discarded. There was no replacement.

The people inhabiting the city were a race the gods befriended when their own people were dying off, bringing them and their slaves within the walls to act as guards and do the work required. The gods, or engineers, who built the great machines died with all mechanical knowledge possessed by their own people.

The people of the city knew the last of them went the way Tom came—into the building several distances below ground. He was looked upon as one of the gods returned. Back through antiquity they had guarded the way, but he was far from the way history told them he should look. They were weaklings, he a giant in strength, but after the first scare it was decided he must have come from the gods or he could not have entered through the forbidden passage.

As he mastered enough of the language to converse with the General it became a certainty he was a messenger from the gods. He knew a great deal about machinery and fixed various lit-

tle electrical appliances they brought to him, although he thought it just a favor when he repaired the different things.

The period of inaction on his part gave plenty of time for thought. The conviction he was in a different world grew. In some inexplicable way the new radio wave had carried him over. The giant rotor had drawn him into the engine room and deposited him near the axis. His escape was miraculous. He passed the worst torment from the power before full consciousness returned, and blind instinct carried his feet in the right direction.

The world he landed in was like their world of five thousand years before, but with the highest developed engineering. The warmth of the buildings, the light, every known convenience was an inheritance from a race nonexistent for thousands of years. What they were or where they came from was a mystery. The servant girl gave little reason for the present race knowing nothing about machinery or the things they used in daily life: The gods had taken them into the city and turned over comforts built for another race.

The engineering died with the gods who kept mechanical knowledge as their hold over the multitude brought within their doors. They taught them to leave all mechanical equipment alone by shutting off the power when the guests trespassed too far; and the fear of touching anything had grown to be a religion. The race of people who left all the comforts rose higher and higher in their esteem until they were worshiped as deities.

Placing the races in their proper position eased his mind considerably. He feared the engineers' discovery of his presence until it became a certainty he was the only man in the city who knew anything about the machinery they used.

The servant girl proved to have the highest intelligence, fully as developed

as the General. His friendship was of great help. He was the son of the Ruler and held a very high position. He it was who suggested that Tom was a god, and was responsible for the comfort he received as a guest.

IV.

FROM THE WINDOWS gardens stretched for a great distance and Tom learned they were the source of food for the city. Hundreds of girls toiled in them and the crops, although growing very fast, were very fragile. Animals grazed in small fields farther away and in the distance a wall several hundred feet high could be seen to inclose the entire city and gardens.

Tom turned to the girl, whose name sounded like Zola. "Zola, why is it no men are ever at work? I have watched the girls toiling day after day but have never seen a man working. There certainly must be men of your class in the city who are much better fitted to do the work than the girls out there."

Zola was surprised at the question, and showed it. "Why! The few men there are never do any kind of labor. They are kept in every comfort."

"So few men, you say?" Tom asked in surprise. "How does your race continue if there are so many more women than men?"

"There have been very few men left alive for hundreds of generations now," replied Zola. "The men, unless they are kept alive for breeding purposes, are killed soon after birth. Only those chosen by the masters to propagate the race are let live. History tells that in the past men were let live but when they tried to overthrow the masters they were condemned to death. Since then only about fifty men are kept alive in each generation, to father the children of our race."

At the look of mixed emotions on Tom's face she continued, "The women,

who are to be mothers are chosen, and the only work they have is to raise children. There are about five hundred of them who live with the men. I was chosen but my master had me kept for private work."

Tom was very glad Zola had belonged to the General—whose real name was Prince Cama. When he reached out and touched the girl she was trembling. The look of adoration was stronger on her face than he had ever seen it. He found her in his arms and was covering her face with kisses before he knew what he was doing, then, as he let her go, tears rolled down her face.

"I'll have to leave you now, Tom." She had learned to call him by name. "I must give myself up to be done away with. If I don't and they find that you care for me I'll be tortured. It will be much easier if I die now than to wait."

For the first time in his life Tom knew what it was to completely lose his temper.

"You'll what?" he stormed. "You'll do nothing of the kind. I'm going to have something to say about that. Remember you belong to me and what is mine I take care of. The whole city of Borid can't take you away from me. I can wreck it in a few minutes with a short circuit; and before they can take you, I will!"

While he talked, he paced the floor and the look on his face was stormy. "They may think I'm a god, but if they try any funny work they'll find I am more than they can deal with."

At the look on Zola's face he swung around to face the door and saw Prince Cama standing there with a look it was impossible to describe on his face.

"Well," said Tom, as he realized he knew, "what are you going to do about it?"

After what seemed an age he came forward. "I'm sorry, Tom"—he had learned to call him by name as well—"but it is against all the laws of the city

to have anything to do with one of the servant girls. As she says, it would be much easier to let her go now than to have her tortured later for not going of her own accord. Even I haven't the power to help you hold her."

"I'm not asking for any help!" stormed Tom. "But neither is there power enough in this city to take her away from me. I'll wreck every moving part in your city as well as cut off your light the minute you try anything. Bring on your guard and I'll stack them up for mince meat."

It was a vain boast but the prince was taken back and didn't question that he could do as he said. The color left his face and it turned a sickly white.

When Tom saw his advantage he continued. "This may be your city now, but I'm taking orders from no man and if you don't listen to a little reason every one of you will find yourselves outside the walls where you came from. I'm ready to speak your language now and can take over the repair of equipment which has gone bad, but it will mean you men will have to go to work.

"If I'm killed it will mean your people will die like flies in a short time anyway. It was time I got here to tend to things. There is only one elevator in this building in good condition, the others are in bad shape and only two of them still work at all. There is only one electric bulb out of fifty that still burns.

"I know you have had to crowd up and desert many buildings for the same reason. All the equipment has gone bad, but it will only be a short time until the equipments in the others is the same way. For generations you have done no work and have deteriorated to a race of weaklings. The servants are much stronger physically than you are and it will not be long until your race dies off of its own accord.

"Where there were over a million of you ten generations ago, there are less

than a hundred thousand now and in another ten generations there will not be one of your people living. You can go and tell your father that I can make a strong, healthy race of your people, but, if I do, he will have to do as I say. I have said all that I'm going to, and if you don't like it I'll send you more trouble than you dreamed existed."

FOR SEVERAL MINUTES the prince stood trying to digest all Tom said, then bowing low he replied. "I am only a prince of the city while you are one of the gods; it is not for me to question and I will do as you say. My father is very proud and stubborn but I hope that we may still be friends. Do you intend to rule the city from now on?"

"No! I don't want anything to do with the rule. Your father is welcome to the city and everything in it, but there are several things he will have to change to save the race. I hope he can see reason but if he can't I'll force him to the wise course. This girl will say nothing about what we have said, it will be just amongst ourselves. Your father can make the new laws required and I will just be an adviser."

As the prince turned to leave Tom caught him by the shoulder. "I'm sorry, Cama, to say what I have. Things have been wrong for a long time here and you didn't know it. I know we can always be friends; I have learned to think of you as a brother."

It was a long time after Cama had gone before Tom turned to look for Zola. She still crouched where she had been before the interruption, with a far-away look as she gazed into space. When he approached and swung her toward him it was with a look of hurt pride. "Maybe I've been taking too much for granted, Zola? If I have, I'm sorry. Don't think I'll demand your affection because you're a slave. I wouldn't want you that way."

The look she turned toward him told more than words as she dropped at his feet and threw her arms around his legs. There was no question of her affection for him. As he drew her to her feet and put his arm around her, tears ran down her face.

"Don't cry! There is nothing to cry about. It will be all right now."

"I—I know, but when a god treats a slave the way you have, I can hardly believe it. It would be much easier if I went to them now, there would be no trouble for you and now I'm afraid of what the Ruler may do."

To hear her, made Tom afraid.

"Don't ever say that again. I love you beyond words. Even though I would like to help these people, you come first and they can't take you from me. Promise me you'll never give yourself up, no matter what happens, but will stick to me."

Gazing long and earnestly into his face, she promised before turning away.

There was a poorly working telephone system installed throughout the building and now it buzzed faintly. Zola pressed a button and stood facing the wall where a small opening appeared. After pressing the button a second time her expression changed as she turned to Tom.

"Hurry! There is not a minute to lose." As she took him by the hand heading back through the apartment away from the front entrance she explained that Prince Cama had called—warning them the Ruler had sent guards to capture him for treason. As Tom hesitated and would have turned back she pleaded with him. "Please, Tom. You can't fight the whole palace guard. You will have plenty of time to fight all you want to, but now we must get away from here."

"There are plenty of empty buildings where they can't find you in a long time and I've seen you fix enough of the

machines they brought so I know you can make the things work and be comfortable. I doubt whether they will even try to find you, there is too much of the city to search."

"How are we going to get out of the apartment, Zola? Is there another exit from here?"

"There are many things the masters have forgotten since they lived here. The slaves know of passages that travel all over the city and never touch the main rooms at all. They will never find them. Hurry or they will be here before we can get out. They will come through all the doors at the same time."

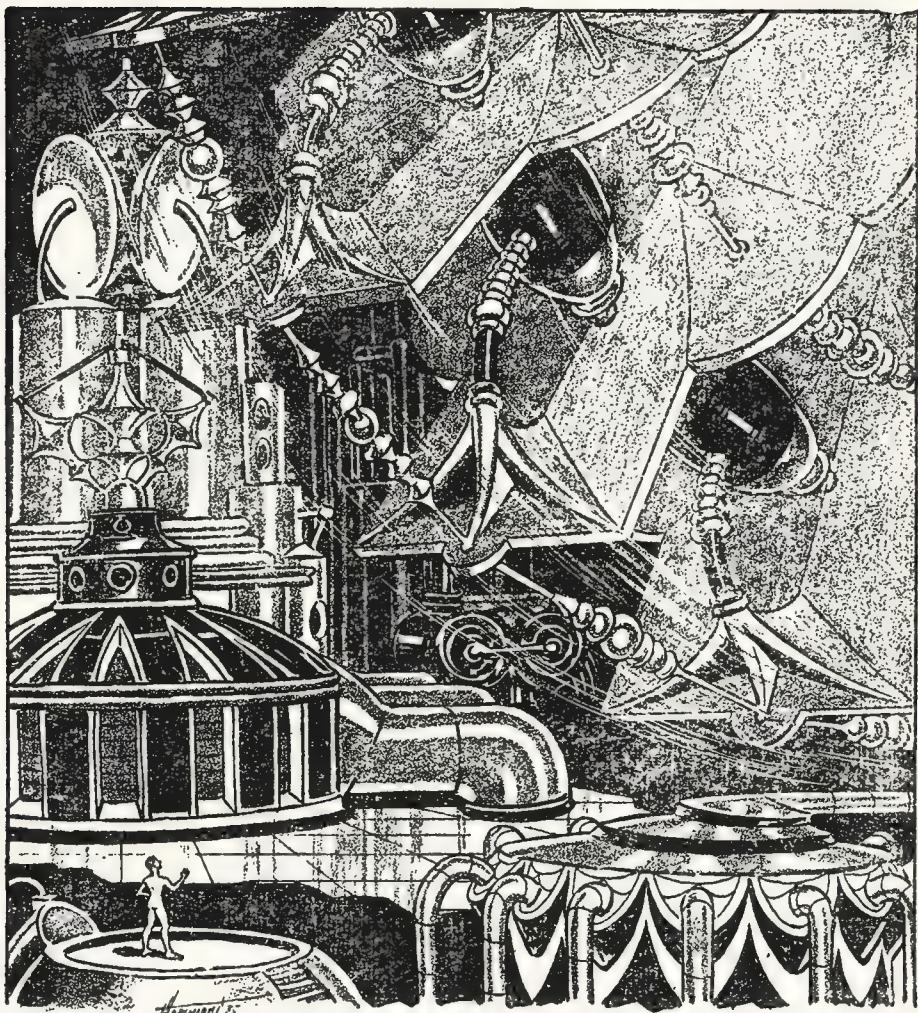
In a small room, beyond any point Tom had been, she stopped above a certain stone in the floor. When he was sure she was trying to lift it he reached down with one hand and picked it up. The look of consternation on her face told she had never seen his strength before. Since they had been in the apartment he had no reason for exerting himself for any purpose and now, as he lifted a weight with one hand that a strong man could hardly move, wonder showed in her face.

"I heard you were very strong but I never dreamed you were as strong as that. You must have the strength of twenty men." Then she motioned for him to enter the space below.

It was pitch-black and for a minute, as his feet hung in mid-air, he had the feeling of falling, but as he let go the floor met him only a few inches away. Looking up he saw Zola trying to replace the stone block from the upper side, leaving herself out of the exit.

He tried calling to her to come down, but she only tried the harder to get the stone back in place. When he knew she wouldn't come he jumped for the opening and to his amazement his muscles carried him back to the floor above. He landed in a heap and as he got to his feet Zola was again staring at him as though he came from another world,

STRANGE CITY



Although a thousand feet away, he could feel the energy from each blade—it was beyond imagination!

and, as the truth of it struck him, he laughed.

"Don't stare at me that way. I had to come back for you. You wouldn't come of your own accord. Take my hand and I'll lower you down."

In a minute she obeyed and as her feet touched the floor he heard excited voices from the other room. It was only seconds before he tipped the trap back on edge and slid himself down with the stone settling back above. It was

quite a job to hold it with one hand as he got ready to let go, but one final push and his fingers were free. He landed beside her as the stone slipped back into the groove it had occupied for countless years.

V.

"WHERE ARE YOU, Zola? It certainly is dark down here. I hate to think of running away from that swarm

of bees. They hardly have enough strength to cut me with their swords and I could make them look like a bunch of monkeys."

Her hand found his in the dark as they walked along the passage. He was thankful they had waited. Something might have happened to him. He had two to think of now.

They had to feel their way along as there was no light but, as he reached up, he felt a bulb overhead that was not broken. Searching a minute, he found the switch and the way was lighted. Every hundred feet there was another bulb and they found they could see from one light to another.

From there, the traveling was faster. While he turned off one light, she turned on the one ahead, so they had constant light. Somewhere there must be a master switch that lighted the section, but at present they could go along fast enough without trying to locate it.

Several times they stopped and listened, but there was no sign of life behind them. He was going to stop and take out some of the bulbs to carry along until she assured him they could get plenty from a storeroom before they reached their destination.

"If we hadn't come this way together I would have tread it alone, seeking a place none of the masters know exist. I'll show you something very startling before we have gone much farther. There are many things I have never told you about my people."

They started down such a steep incline it was impossible to talk. They had to watch their footing on the slippery stone. Then, as a light appeared ahead, Tom pointed. Zola laughed.

"Yes. That is where we're going, and I'll show you a city the masters don't know is here. It's a city of my people. Every once in a while one of the slaves disappears and this is their haven. There are several thousand living in the building, deserted by the mas-

ters long ago and supposed to be unused.

"We knew where there were plenty of lights stored and have been able to light the places, but have never had any heat. The heating plants were burned out generations ago, before the buildings were deserted. My people have gradually increased in number until there are only about ten times as many of the masters in the city as there are of my people.

"When they started to kill off the men at the time of rebellion a good many escaped and came here but our numbers have never been strong enough to overcome the masters. The living conditions are too hard and without heat it is hard to keep healthy. Every once in a while there is some disease that kills off a good many and we are set back that much farther."

Tom had been learning of another strange part of this land. A city within a city, and not known. With a little training he could have an army that would force the ruling race to his bidding.

But he wanted to give both peoples the same rights. There was no feeling of right or wrong between the two. It was merely a case of who had the upper hand. If the positions were reversed the others would be enslaved and afforded the same treatment they had themselves granted.

As the light grew plainer Tom could hear voices and at the next turn they were stopped by guards but recognizing Zola they bowed down.

"Your highness, we thought you would never come. Rumor said that you were taken for a breeder and were lost to us."

At the words Tom turned to Zola, repeating, "Your highness?"

Zola, smiled. "Yes, I am of royal blood that has been kept in a direct line, although we marry outside of our family to keep the blood strong. Our line

has been kept unbroken from the time of our capture in our own distant city. The line has come down to me."

As they entered the building Tom felt a little glow of gladness. She was not a child of the breeding rooms.

IT WAS not long before they were walking upstairs to the upper levels. They traveled down to near the bottom of the building before they approached the entry from the passage.

Several times they passed the doors of elevators long since out of order. He hoped to find men who could help with the repair work. But if they were as helpless as the masters he would have to train them before they could be of any use.

As they climbed from floor to floor the size of the building was apparent. They traveled several hundred feet between stairs on some floors, passing hundreds of rooms showing signs of usage. A chill in the air told the discomfort they lived under, while other buildings had warmth and comfort.

Zola explained that, of the servant girls in the city, many would be loyal to their masters and would not help overthrow them. So they counted without the servants when they thought of their own people. Only those showing a decided race feeling were taken to their hide-out and then after the most rigid tests. That was why they were able to live within the city without the masters' knowledge for generations.

Near the top, the absence of people became more apparent as vacant apartment after vacant apartment was left behind. All worked except the ones tending the children, and as they came into the glow of the outside world he saw them toiling in the gardens.

They had changed the roof of the building into a garden spot and spent their time raising food there. It was out of sight from the rest of the city as the top stood well above the nearest

buildings and there was none in the distance quite as tall. They were as safe as though a thousand miles separated them from the rest of the city and had toiled here undetected for a thousand years or more.

The philosophy of the people in this world was beyond comprehension. They toiled for a thousand years, looking forward to the time they could change places with the masters. They never thought of looking beyond the outside wall to see what the rest of the world was like. They just stayed.

A legend of monsters beyond the wall was so strong they didn't dare attempt to cross it, but were content to live in peace. The gods had rescued them and their masters back in the dim ages or they would have been killed on the outside, and the belief of certain death kept them within the walls of the city.

This building was formerly the palace and everything in it the finest in the city. Used more strenuously than the others the wear was that much greater. As he stood looking, a large square in the center of the roof caught his eye.

His new friends didn't know what it was, but there were giant machines inside. Tom decided to investigate the first chance he had. Now his attention was taken up while the people gathered around and Zola told them one of the gods had returned.

Hours later, having slept, he decided to do something about the chill of the building. It ate into the marrow of his bones. The chill seemed to grow, and every hour that passed it went farther until it reached the point of numbness.

No wonder the people hadn't multiplied faster. The outside temperature was cold. It was little better in the building although they crowded up for warmth.

CALLING ZOLA he asked for men to help with the heating plant. They had plenty of power in the city, as the

source that supplied the whole city before was evidently intact, with only a few buildings to supply now.

After considerable questioning there was a man found who had once been down to a place where there were a lot of machines, but he left very quickly. Had not the gods forbidden them to enter any such place? But now a god had returned and was taking them into forbidden ground to fix some of the machines. It took a lot of grit to overcome the fear they had entertained for generations, but they didn't hesitate a moment, filing silently down the stairs.

The fanaticism was pitiful. Generations let the machinery in the city stand and deteriorate through lack of care. The builders had instilled the fear of touching anything, so strongly it had carried on as a tradition. If nothing was done to repair the damage the whole city would soon be a heap of deserted machinery which only needed a little work.

The trip down the runways and stairs took considerable time, and long before they reached bottom Tom lost track of the number of stories. The building could easily house thousands of people. The city at its height must have had an enormous number of inhabitants.

The ravages of disease had taken them like flies at a certain stage, just prior to bringing in the people who now lived as masters. The lack of sunlight had gradually weakened the race to the point where they could no longer withstand any hardship, and disease had run riot amongst them. The present inhabitants were doomed the same way unless some artificial means of creating normal health could be found in a short time.

Doors that were all Tom could do to force open led to basements far below the point where the building was used. They found subcellars far below the bottom story. The building was constructed mainly below ground. At

least fifty of the floors were below the surface, yet the basements were far beneath these. It was hard to realize the distance down to the entrance of an engine room stretching for several hundred feet.

From ceiling to floor was a solid mass of machinery and Tom knew he had an almost impossible task. It would take a month to find the use for even a small portion of the motors and coils in sight. Finding only a few of the bulbs could be lighted, he sent two men back for a supply. These people were very careful of their stock and showed they looked ahead farther than the masters who were content to waste. The reason for the difference was clear.

The masters had nothing to look forward to. Every day into the distant future was repetition without change. There was no advancement, no possibility of any gain for the race. The fear of touching any equipment had removed any possible interest in the city itself. Life was just to be lived until the time everything was either worn out or out of commission.

The slaves looked forward to the comforts the masters enjoyed and to reversing their positions. There was more health among the slaves due to the men and women laboring day after day in the gardens to eke out an existence.

The machinery for cultivation had long since been discarded and no one could make more. A few hand implements were still in the use of the masters but it was one of the greatest lacks in the city. There had been no manufacture of any kind.

The clothing had been stored for hundreds of years in warehouses. The supply was very short and the slaves had only found small quantities in rooms adjoining the secret passages which honeycombed the city. Clothes were jealously guarded and the use restricted to appearances in public. None of the

workers who toiled in the fields and gardens wore any. The lack of clothes had become a standard thing and if it hadn't been for the feeling of reverence the masters felt for him Tom would have been denied their use in his apartment.

When the men returned and the lights were replaced Tom could see every inch of the room from a small platform at one end. An automatic switchboard on one wall was the only moving thing and the feeling of desertion was complete.

HE felt the first twinge of homesickness and only by supreme effort could dispel it. There was work to be done and he felt that the channel once crossed from Earth was not to be recrossed. He had work to do here and could be the salvation of this race. Their hope for the return of the race who had built the city would be realized through him. He knew enough to handle most of the equipment, although a great deal was new to him.

Before turning away from the platform he tried a door in the wall behind him. As it opened lights appeared in the walls behind clear partitions similar to the walls of the switchboard in the engine room. Tiny models of the machinery stood before him.

It was like a dream to see the miniature models of the vast machines so plain. It simplified matters greatly, as the parts were placed so their relation to the rest of the machine was very plain. It would mean hours of study instead of weeks to find their use. Hope began to return. The task was not insurmountable at that. He could repair them in less time than he thought. But the question of material was important.

Questioning, he found that a large quantity of cable and all types of parts were packed in a room they never entered but which was of such size it

might contain the repair parts for all the machinery in the city. It was a long way off and it would be almost impossible to bring any sized part without fixing the car which went to the building.

As he studied the small machines before him the scheme of things took form. The equipment was quite simple. Few moving parts showed, so few he couldn't at first grasp the meaning of the stationary parts. Then it became clear! Instead of the usual gears and wheels he expected, they used magnets to operate the parts sliding back and forth in grooves.

As the simplicity took form in his mind it was clear why they had run for generations. Deterioration from standing was so small it would take a thousand years for the amount of rust to gather that a year would see on Earth.

Each part had a small magnet attached which tripped the flow of energy so it always had pull from coils ahead. When the limit of action was reached it would reverse while it slid back.

Twice he reached to feel of some part, the models appeared so plain through the transparent surface. Each time he jumped as he hit the smooth wall.

The men were dozing when he looked out once before returning to the task of digesting the layout of machinery. As the picture took form in his mind it was not a complicated but a very simple room that lay before him. Then, noticing a button below the machine he knew was the heating plant, he pressed it.

The coloring of the model changed and certain parts were brought out larger, tinged a peculiar shade of green. At first Tom closed his eyes to change the optical illusion but when he opened them the model remained the same and he knew he looked at a type of television. The actual machines were pictured before him.

On closer examination, the parts

showed in relief those which ceased to function and the trouble with each part was clear. Tom's admiration for the men who took care of every contingency, mounted.

A few minutes' study was sufficient to find the cause of failure in the heating unit and Tom called the men as he went toward the machine which stood a hundred feet square.

The master switch was operated by a small unit and Tom watched fascinated, as it was thrown open leaving the machine without energy and safe to approach. The man's legs shook as Tom opened a door in the metal and beckoned for them to follow.

A SWITCH inside the door lighted up every part, and the vast heating coils took his breath away. The amount of energy they must burn would tax the largest plant on Earth to supply. The energy source for the city was inconceivable, yet somehow it hooked up with the engine room he had first seen. The energy in that room would be sufficient to handle these parts, but any smaller machine would hardly handle the lights.

The heating unit was in good shape and the parts which had failed proved to be in working order. One part had frozen to the track due to lack of lubrication. The tank which supplied it was drained and the track deeply scored where the metal had traveled long after the lubricant was gone.

When he tried to send one of the men to the storehouse for oil they were so afraid he decided to go himself and bring what was needed while checking over the parts stored there.

Further examination proved that only cable replacement was necessary to have the machine working again. The men with him were exhausted and it was only through supreme effort they followed him along the line of cars in the wall, searching for the one which would carry them for the parts required.

He believed somewhere there would be a car leading directly to the warehouse from as important a building as this.

The men read the words over each car as they came opposite, but nowhere in the long line was one which mentioned the storehouse. Several were very puzzling as they had a list of names with buttons beside each. Examining the names carefully, he decided the buttons routed the course of the car. The cars with more than one name beside them were always larger and this tended to prove the theory.

One of the men discovered another car directly below the platform and this proved to be the one to the supply house.

None of the men had ever been in one of the cars, they had always lived in deserted buildings and not one of the cars on the upper floors still worked.

When they had all entered the car with Tom's urging he closed the door and waited to start, but nothing happened. After several minutes he had given up all hope when a button on the wall caught his eye. Pressing proved to be the key. The car started and picked up speed until it tore along at a terrific rate. He hoped they were headed for the right place.

The car hadn't been used since the race of engineers had gone from the city, yet was in as perfect condition now as when it was built. It would mean only a short time until the building would be functioning again with every machine in shape.

The car slowed to a halt after several minutes and when the door slid back his eyes wandered over rows of material: every type of part from cable to armature! Complete cars such as they had just come in were hung suspended from the roof.

They were operated on the same principle of magnetism as the other moving parts he had seen and the simplicity showed it wouldn't be hard to have

them all working in the building, and communication resumed. There were elevators as well, handled by magnets mounted on top instead of the sides of the cars.

Selecting the material they needed to replace parts in the heating plant he turned to look for the men. They were not in sight, but after a minute he discovered them lying on the floor where he left them, sound asleep. Their vitality was so low Tom was sorry he hadn't been more considerate.

The room had taken his attention so he had forgotten the time and it might have been hours they waited. When he spoke they jumped up looking sheepish but seemingly refreshed and before long the equipment was in the car.

When they reached the basement he sent them to their apartments, instructing them to send down more men with something to eat.

VI.

HE was engrossed in the work in a minute and didn't know any one was near until Zola touched his shoulder. Behind her stood several men carrying food.

"Don't you ever rest, my Tom? You have been here over three rest periods now and I was worried. I came down myself to find the reason. The men told of the wonderful trip they had in a car and I thought if you were going to make everything work soon I wanted to see for myself."

"I'm glad you came, Zola. Before long we'll have heat in the building again. Tell them to leave the food until I get this fixed."

"Oh, no, Tom! You must stop and eat now. I know you are different from my people but you still must eat. You may work hours before you think of food if you wait. I've seen you work on a little thing and know you forget everything else when you do."

Tom gave up with a shrug and walked out with his arm around her shoulders, as the men showed their relief at the escape, from the machine, of their princess and this strange god she loved.

The other men told of his treatment, so they just stood back and admired. They had gone into the room with machines of the gods, and come away unharmed.

He warned them not to touch anything unless he told them or they would be burned up. This they readily believed; several times they had seen men touch something the gods built. Voltage was a dangerous thing for them to be near.

Zola watched as Tom returned to work directing the men. With their help things went faster and he tried to explain the working of the machine, but when they only grasped the meaning of a tenth he said he gave up and directed their work a move at a time.

A short time later the parts were all in place and when the men stepped far enough back he threw the switch.

A low hum came from the machine, and looking in Tom could see the coils gradually take on a rosy glow, parts began to move as the warm air was pumped through the shafts of the building.

He shut it down again after a minute and took several men inside with him as he refilled every tank with lubricant. It became a game to them to find tanks and after a minute he let them do it alone as he checked over every part that moved.

The design of the machine was clear now; he had traced every part in it. While replacing the parts the design had grown on him until he felt sure it would be a simple task to make every plant in the city function.

The worship in the eyes of the men as the giant machine began to work was beyond description and Tom knew he

was cemented in their minds so no power in the city could harm him while they lived. Zola's admiration was the most pleasing, and while he tested various parts, with the machine operating, he explained them to her.

With the masters she had seen enough of the mechanical parts working so she could grasp his meaning and it struck him he would have to train women to care for the machines before he could hope to teach the men.

An hour later the chill was gone from the room and he knew the upper building must be fairly comfortable as the heat would reach there first. The men were so happy at the unexpected warmth they didn't know just what to do, so all took turns yawning and trying to keep awake. Heat had the effect of putting them to sleep. They had never experienced it before and now they wanted nothing more than to sleep in perfect comfort.

When Zola suggested they return to the upper floors for him to rest, he hesitated.

"I don't look forward to the climb with any great pleasure, Zola. It is too far up and I will have to come back down soon to see that everything is working right. Wait a few minutes. There is one more thing I want to look over first."

Searching out a car Zola told him went to the top, after studying the words over the door, he forced it open.

THE CAR rested at the bottom of the shaft and in one corner was what remained of a man. It had been there for untold ages and evidently the last passenger the car carried.

The men cleaned it out with no more feeling than to sweep out a little dust.

Tom found a small door leading to the base of the shaft and after looking the wiring over found where the cables had worn through the insulation

letting the car settle to the bottom where it stayed until just disturbed.

That was the only trouble; and it wasn't long before he replaced a section with material he brought from the storehouse. Finding the car could only settle slowly if anything went wrong, he called Zola and they entered.

A board on the wall with buttons for the different levels was simple to operate and he tried taking the car up ten stories first. It came to a smooth stop at the given floor as the door opened before them. It was a great thing to Zola and she tried pushing first one button and then another to make the car go up and down while Tom tried hard to hide a smile at her childish pleasure.

When she tired he took the car to the basement and they came out to find the men standing in a group with looks of fear on their faces but the return of their princess reassured them. From the number of buttons there were well over a hundred stories, although he didn't count them.

Before the men entered the car to go he thought of something else and returned to the storehouse for tools for working the gardens.

He sent several loads to the basement before he was satisfied. There were motor-driven machines with storage batteries for power that could do the work of fifty people in a day. He must replace some of the labor so they could help in rebuilding, or the food couldn't be grown to take care of the people.

A unit to hook into a light socket for charging batteries next caught his eye, and with a little searching he found several. It wouldn't be long before they would have plenty of food.

He taught one man to run the car back and forth while another ran the elevator. Leaving some to load each car he sent a solid string of things to the top of the old palace, which would

begin to come back to a semblance of lost life.

Electric stoves were taken to give some of the people their first taste of cooked food.

When the workers began to tire, he took them back to the palace. Arriving at the top story he was surprised to find the quantity of material brought over. The dry batteries in the machines responded to current and began to take a charge.

When the tools were all placed in rows by more workmen he decided to take a little rest; and for the first time felt tired. Hour after hour he had toiled with no thought of himself; but now as the warmth and comfort began to take effect he could hardly keep his eyes open.

He awoke later to find the building at a standstill. The heat put every one to sleep and the time they slept in the first real comfort ever known was hard to judge.

The gardens were filled with weeds and the crops looked sick as he wandered around before calling Zola. The crops grew fast but it must have been several sleep periods they had gone untended.

Hurrying back he shouted and the people began to appear as he went down the halls. Zola, glancing out at the gardens before joining him, saw certain famine before they could catch up with the work.

After sending several of the men to call all the people, he turned to her. "It's not as bad as it seems, Zola. I brought tools that can help catch up the work. With them you can grow plenty of food with few of your people."

This reassured her somewhat but she still worried when he took several people to instruct in the use of the machines. It was an arduous task for them to operate machines they had never seen before but one man was especially adept. Tom spent some time teaching him to

handle one very well. One man learned to take the charger from one machine to another and keep the batteries up to full charge.

Leaving his prize student to instruct the others in the use of the machine, Tom went looking for Zola in the gardens.

THE PEOPLE were working desperately to straighten out the crops and harvest those ready to come in. Zola went everywhere to see they put forth every effort, though every man, woman and child was laboring against time to escape starvation.

After the most intensive training men drove the electric tractors and cultivators into the fields and the work of cultivation went forward faster than the whole population could carry it before.

A few hours meant a great deal of harm to the crops. The fragile plants were the only ones edible. The weeds were of a rope-vine type of growth and choked out everything. It was a continuous struggle to grow sufficient food for the people and the lack of care for at least two work periods was near disaster. The food shortage could never be caught up. It meant short rations for several weeks to get them back to the point of sufficient output to take care of the needed supply.

Ten tractors were busy before the next rest period and the crops in fair shape, although a lot were crushed by the wheels rolling over them.

The crops were saved, but there was a great loss of quantity. The machines could put more ground under cultivation but the seed would take away a good portion of the food supply. They looked forward to weeks of the slimmest rations to gather the extra seed necessary.

Tom started a school when the tractors had replaced many of the people in the fields, and before long a crew of mechanics could tend crudely to the

machines at work. Then he stopped for a breathing spell.

The shortage of food was serious and Tom tried to find some way of helping it out, but without result. They had to wait for the crops to mature seed and grow again. The main crops matured in about thirty rest periods, but that was a long time to go hungry.

He often wondered, as the days passed, whether the Ruler had found any trace of his escape and whether Prince Cama was suspected of warning him. He had missed Cama, the only friend he had made in Borid.

AT the first opportunity, he approached the building in the center of the roof.

There was only a small door and it took time to find the way to open it. When it finally gave, he jumped! One hand had pressed a stone out of place accidentally and worked the combination. It swung to the side as he marveled at the thickness.

Metal almost a foot thick, it would withstand an army. He stepped inside of walls whose thickness was in proportion to the door. Without question built for refuge in time of attack, it would withstand almost any force. The builders of the city were obviously not free from attack when they built the massive structure.

Occupying the whole interior was a huge metal object. Longer than high, it resembled the shape of an egg. Tom approached slowly, not knowing what to expect.

In the larger end a panel of clear substance shone, but there seemed no other break in the surface. Following the curved side toward the smaller end he came to a door with steps leading to the interior. Looking to see where the faint glow of light came from, he discovered there was no top on the building. It was open to the sky but the walls reached so high they let in

only a small part of the outside glow. As he went on into the egg there seemed no explanation for the lack of roof.

He felt along the wall in the pitch-black as he crept along. His hand encountered a switch and suddenly the interior flooded with light as he looked around.

It appeared like quarters for men, with a bunk along the wall that could accommodate forty or fifty for sleeping. Tables and small stools were fastened to the floor. Every object was fastened down!

Passing through a door toward the front, he entered an engine room. In the center stood a rotor about twenty feet across, a miniature model of the one he first saw deep in the Earth.

Several small machines stood near the curved walls, but all centered at the rotor as if it were their guiding force. A slight movement appeared at the rotor and on closer examination he saw the blades were turning very slowly; so slowly they had to be watched very close to detect the change in position.

When he touched the blades to feel the movement he jumped back. There was a current in them—only equal to ordinary house current but sufficient to be sure he wouldn't touch them again. There was sufficient energy for the lights and he knew they must be hooked up in some way. Where did the energy come from? There was no outside connection with the main building; it must be created within the egg. A great light dawned on him. The apparatus was creating it from some force contained on this planet.

The big rotor he escaped from came to mind. It was the source of energy for the entire city and had been unfailing for thousands of years. The rotors gathered energy from the atmosphere in some way. It wasn't created by them; they were just the gathering point.

He had evidently tapped the energy

waves on Earth that compared with those here and the rotor had drawn him over! The location of this planet was a mystery. It wasn't in the solar system as no other heavenly body had shown in the sky since his arrival. It must occupy the same space as the Earth, but in a different dimension.

The surface of the planet would be very interesting. What if it had the same oceans as the Earth—the same land and mountain ranges? It was far easier to understand being pulled from one dimension to another than to think of being carried through space to a planet so distant there was no sign of the Earth's planets or Sun.

In the front of the room, toward the big end of the egg, a circular stairway led upward.

The floor above the first level only caught his eye for a fleeting look. It stretched the full length of the ship and every few feet a tube was turned up in the air, as if to be lowered through the side of the egg where sealed portholes appeared.

THE NEXT FLOOR was quite different and the room he came into had the clear plate in front. He could see the outside, and, by getting his face close and peering down, could just catch sight of the small door in the wall.

There were switches on the wall near the stair and the room leaped into bright light. The lights controlled from the switch downstairs were only a skeleton system. They were just guiding lights to reach other parts of the egg.

A flat board in front drew his attention and, examining it, the feeling it was the instrument on some type of ship became a certainty. There were dials strangely like a compass but with more points while some seemed to point out certain names as though pointing to spots on the planet—and he wondered.

Half a dozen small levers looked like

controls. Moving one he jumped back.

A hum began to come up through the shaft from the engine room and running to a cabinet at the side he threw a switch. The same type of television that pictured the machinery in the basement brought out the interior of the ship in sections.

The rotor was spinning faster and faster every minute and suddenly the ship began to rise. When he glanced out through the panel, the walls around the ship were dropping fast as the ship gained altitude.

Running to the levers, he put the one in place that was thrown out and the ship stopped rising. One after another he moved the others slightly to have the ship swing first one way, then the other. Once it jumped forward and it was not until the nose touched the wall that he could stop it.

It backed up, then pointed the nose up, then down. Tom was dripping with sweat before it straightened out again.

Now he was in a spot. The ship hung a hundred feet above the floor and he had tried every lever on the board. When he knew the ship was stationary he sat down in front of the board and thought of every combination of levers there could be, and found no way to get the ship down again.

A tentative touch of the levers brought the same reaction, only this time he was up another fifty feet. Studying them until his head ached he started to turn away, when his foot touched some levers beneath the board.

Slowly he tried one, only to hear the hum of the rotor below increase to a scream and when he peered in the television screen the rotor was spinning so fast the blades were almost invisible. He waited until they had slowed down before he tried again. This time an alarm bell rang as the doors closed throughout the ship.

After several minutes he tried another, very slowly, and the doors opened

again. There was only one more lever to try and with his heart in his mouth he pressed it.

Slowly the great ship began to settle. As he pushed farther the speed increased and he instantly released it, but there was quite a bump as the ship touched the floor again. He pulled the lever to take it up or there might have been quite a smash, but that offset the fall enough to stop more than a bad bump.

Tom left the ship after turning off the lights with a feeling he was lucky not to be stranded somewhere in the sky above Borid to drift with the elements.

The ship wasn't injured as there were springs on the bottom to take the shock. He determined to train some men, as crew, at the first opportunity and to explore the surrounding territory.

Inside the door in the wall was a cabinet he had not seen before. Some long peculiar rods were arranged in racks. One had a hand grip and looked like some kind of tool. Replacing it, his finger touched a button on the side and a heavy shock similar to a gun shook it.

Looking up where the end of the rod had been pointed a hole appeared in the stone of the wall about two hundred feet overhead. He tried it again and again as a row of holes appeared where it was aimed. It had the same power every time.

A gun! But more powerful than any he had ever seen. Instead of the falling débris he expected there was nothing left. The gun consumed the stone completely.

A resemblance between the tube in his hand and the big tubes on the second floor of the ship became apparent. They must act the same way, but what devilly weapons if their power was in proportion to their size.

A small tube fitted under the barrel seemed to contain the charge and after slipping it out the gun no longer

worked. He placed twenty shots, yet the charge was only slightly used. After trying one of the other guns he took it along and carried several new charges with him. So far he had no need for a weapon but he never knew. It was a strange world, the rulers were hunting for him, and some danger might be around the next corner.

VII.

TOM'S NEW FRIENDS were getting thin from lack of food, and he worried constantly about them. For several days he had wandered the passageways alone, and when he found a car taking it to the destination. He had shot from one side of the city to the other and been in hundreds of buildings, anything to keep from the sight of half-starved people.

He discovered many manufacturing plants, still in good condition. It would only take a little time until they could be operating again. Some flashlights that could be charged were the greatest find and he used them constantly.

The city was roughly ten miles square and beyond the manufacturing plants were great warehouses with every kind of goods stored away. When the food could be rationed out properly again he would bring back such a wealth of things as the people never dreamed existed.

One warehouse was filled with peculiar little tubes. They were stored by the thousand and Tom was intrigued to find what they could be. He had no way of opening them without spilling the contents, so he carried one with him for the rest of the day.

When he had reached the palace again and was ready to retire it came back to mind. When he had carefully opened it over a dish to catch the contents, it did not pour. It had a very familiar odor but he could not quite place it.

When he had shaken considerable of

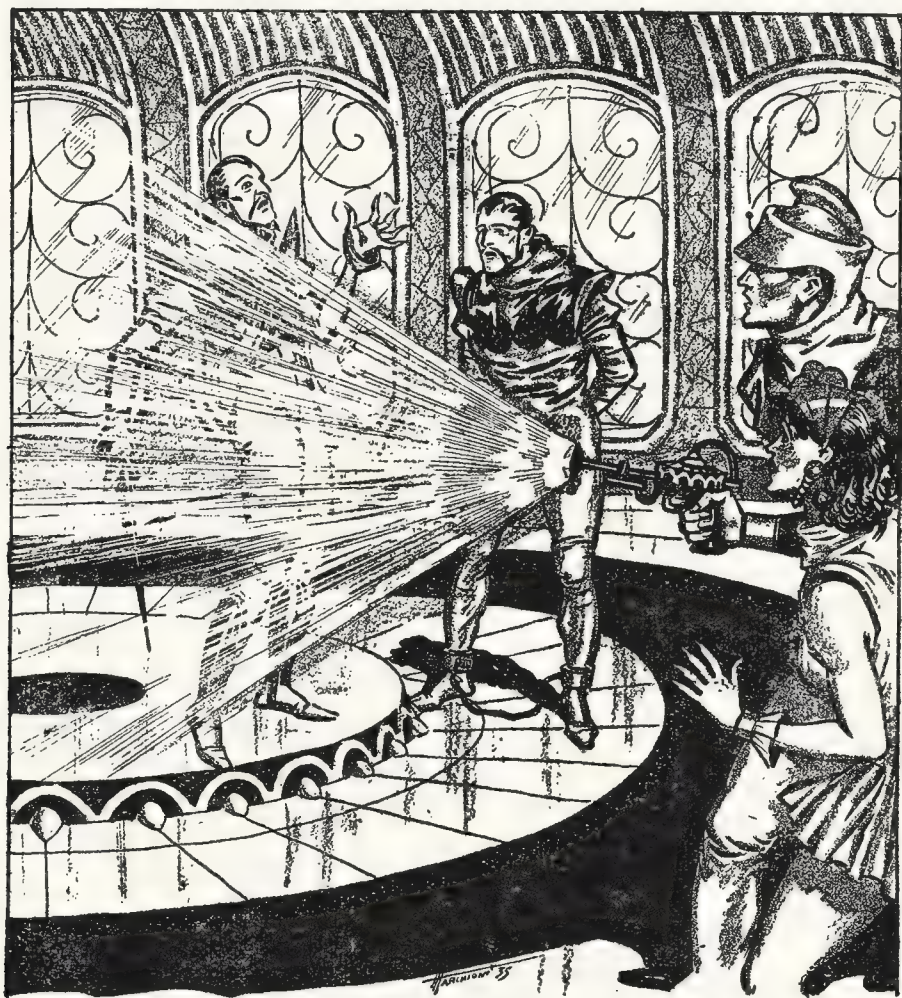
the contents out, it suddenly struck him. It was preserved fruit of some kind! The greatest find the hungry people of the city could have.

Forgetting he was tired, he called Zola and told of the amazing discovery. Gathering a hundred men he started out to retrace his steps.

It was a long way to go. They had cars to travel on, most of the way, but about a mile of the distance had to be walked. The men were delirious with

joy when they discovered the reason for the trip, and Tom had no trouble to make them work like demons getting food back to the building.

While the rest of the people slept, they labored, and before time for them to go back to work in the morning there was ample food for every one. He put men to work in the morning on the cars that would go direct, and before night a huge quantity of canned food was packed away. They had the first



*When the arm started forward, the man disappeared—
the sword fell with a clatter.*

meat they had ever eaten. The masters were the only ones who had any meat at any time and that rarely.

He had given the people comfort and plenty in this community; but his friend, the prince, and the masters bothered him. He must get in touch with them some way. He wanted to unite the people in the city on equal footing with the work divided amongst them. There would be some in high positions and a good many who wouldn't be employed in labor, but they should all have work.

He wanted to start the mills and manufacturing plants in the city to turn out necessities, and all the people in the city would be none too many to carry on the work. They had the chance for every kind of convenience if they would forget the traditions they had entertained for generations. It would be hard to make them see, but it could be done and he intended to do it. The question was how?

The men he trained as mechanics were much slower than the women who had lived amongst mechanical equipment a good share of their lives. But the men showed greater interest and soon replaced the women. They came to him often to find out certain things and gradually covered every mechanical part in the building.

He instructed six men in the repair of elevators and now they labored day after day to have every car in working condition. No longer was there need for any one to go and come by foot. Cars were constantly sliding up and down the shafts.

Five hundred men were able to care for the gardens and grow twice as much as before. They were the ones who showed a special interest in farming and took real pleasure in it. The people Tom had a job finding work for he put in a big school to learn the rudiments of mechanics. The women no longer worked, but stayed home with the chil-

dren; or, if single, they tended to the cleaning and light work around the building.

Five men were working on the telephones, and a skeleton system was gradually spreading through the floors.

Tom spent a lot of time repairing the cars that traveled from one building to another. One day he took a car with the destination unknown; the name was unfamiliar to any one in the building.

A FEW MINUTES LATER he was looking into the room where he had eaten his first meal. No one was near when the door flew open and he closed it all but a crack before two men wandered near. The room was religiously guarded as the last place the gods were seen and there were always men on duty.

"I don't know what is going to happen. I know there will be serious trouble if the Ruler does not free Prince Cama. He thinks Cama hid the new man; they were very friendly. Maybe he is a god, but I don't know. Prince Cama is certain that if he's not a god, they commissioned him to return to us."

"Your words would get you in serious trouble if the Ruler should learn of them, but I agree, the prince should be freed. Our Ruler is very stubborn and would put the stranger to death if he could find him, no matter who he is. It might bring the wrath of the gods upon us. Suppose our power was shut off?"

"Yes! I for one saw the man when he went before the Ruler and I know he's not a man from this city. I wonder where he could have come from, if not a god. Do you know where Cama is held prisoner?"

"He's in the room behind the throne. There is no chance of his escape, although I wish he was free. But there is no place for him to go. His friends couldn't hide him for long."

As the men drifted away from the

door Tom shut it carefully. In a minute he was speeding back to the palace with a feeling of sorrow and frustration.

He barred the door of the car as he left so no one would use it. It would be disastrous to have one of the men step out of the car in the room with the masters.

It was a hard task to make Zola believe the masters should have as good treatment as her own people. For years the slaves had suffered at their hands and now she secretly dreamed Tom would lead them to conquer the masters and take their place. The masters should be the servants and they should be the masters.

When Tom had told about the work to be done in the city and the use for all the people in rebuilding, she agreed. It would be best for them all to have the masters free. The slaves would still control the machines for their own protection and it would not be for another generation the masters and servants alike would be taught to build and repair the machines. This would prevent the masters from causing trouble with their greater numbers.

In one generation they would be so intermarried there could no longer be the question of slave and master. He intended to hold things steady with a strong hand until they grew accustomed to the changed conditions. It would be a hard task but one which could be done. Tom decided to begin at once.

Zola accompanied him through the underground passages to the room where Cama was held prisoner. He knew two might escape where a dozen would fail. Slipping the ray gun in his pocket before they started, he felt equal to any emergency that might arise.

It was a long trip through tunnels and Zola was afraid they were lost when the rise in ground became quite noticeable. Soon they were climbing fast and

after a few minutes more they stopped where it swung to the left.

"I'm not certain whether the trap above here or the next one opens into the room where he is. I was only in that room once, when I could locate the passage beneath. I know there's an opening to the apartment where the throne is, and hope he is still in the same room."

"There's nothing like trying, Zola. Here goes."

With a jump he reached the stone around the trap and after several attempts succeeded in getting a finger hold, slowly raising the trap above.

The room was quite dark as he edged his way up and set the trap to the side before pulling Zola up beside him. Not a word was spoken as they groped slowly along the wall, feeling every step.

SUDDENLY the room flooded with light, as Tom faced two guards who looked as if they saw a ghost. He drew his gun as one turned from the room. He had to stop the alarm.

The man disappeared into thin air while the other guard stared goggle-eyed. He only stood a moment before he, too, tried to reach the door but, at a warning from Tom, dropped his sword and came forward. He didn't relish the death of his comrade.

Tom tied him up carefully with the belt his sword hung in and lowering him to the passage beneath the slab warned him to make no noise at the cost of his life.

It was easier to go on through the apartment to where Cama was held than try again through the passage, so they went forward. As they slowly pushed the door open, the sight ahead held them for a minute.

Cama stood facing the Ruler with his hands tied behind his back. The Ruler, sword in hand, was talking. In two places the blood trickled down Cama's chest from cuts.

The two men were so engrossed they didn't notice the entrance of Tom and Zola.

"You scum of the devil! You're no more my son than one of the slaves. The throne may rightfully belong to you but none beside you and I know it and, from to-night, no one but I will.

"Your father died when you were a child and no one has ever known the difference. We looked enough alike so I could pass, and your father was buried as a man who tried to assassinate me."

The look of hate on Cama's face would have killed the man where he stood, if a look could kill.

"Well, go ahead. No one will know the difference. I've suspected for a long time that something was wrong. You didn't remind me at all of the stories of the rulers. But you certainly make a very loving father. Go on! What are you waiting for?"

His face, as the Ruler drew back his sword, was bestial.

As the sword drew back for the final lunge Tom raised the ray gun and took careful aim.

When the arm started forward the man disappeared. The tip of the sword was out of range and it fell to the floor with a clatter.

Prince Cama blinked twice before looking around the room dazedly. When he caught sight of Tom his eyes bulged out of his head.

"Tom! I might have known. You're the only one who could do a thing like that. What happened to him? How did you get in here?"

"Wait a minute, Cama. One question at a time. How I did it does not matter. The only thing that counts—you are still alive and he is gone forever. Now I don't know what to do. I'm glad to know it wasn't your father I had to kill."

When the leather belting was removed Cama couldn't keep his eyes away from

Tom's face. Wonder was there and a little awe. He showed he didn't know what to expect for himself or his city. He knew the man before him could destroy it, whether he was man or god, and he didn't know what would happen.

"What are you going to do with me, Tom? I suppose I'm ruler of the city now, but the people won't believe what happened to him.

"I can't tell them he was an impostor; they would surely believe I lied."

"Don't you worry about what they think at the moment, Cama. I'm going to take you along with me now. Later we can return and they will take what you say as the truth."

AS HE led Cama toward the trap he explained they were going where they could be comfortable until he could return to his throne.

When they reached the trap Cama told Zola to help them down, but Tom held up his hand.

"No, Cama. She is no longer a slave. She is a woman whose favor you would be wise to seek for the time being. She is a powerful figure."

The quizzical look and lack of understanding was so plain Tom couldn't help laughing to himself. It had taken away some of the ego that was born in the prince from childhood.

Tom carefully replaced the slab after lowering Zola and Cama to the passage below. Untying the guard they headed toward the old palace.

Tom no longer worried about the guard. He would follow his prince wherever he led, when a word from Cama assured him they were not prisoners.

Tom said nothing about their destination and as they approached the basement of the building watched Cama's face.

As they neared the guards Tom stepped ahead and they were not molested. A minute later as they entered

a car for the upper floors the surprise could not help showing on Cama's face. The wonder of entering a building with everything in perfect condition, far better than his own people had, took his breath away.

Zola watched him intently and was getting supreme pleasure from his changing expression.

Before the car stopped at the top floor he could contain himself no longer.

"This certainly is a surprise. I didn't know there was a heating plant that worked in the city except in our own buildings. There are many of the slave men here, too, many more than we have left alive for many generations. What is the meaning, Tom?"

His look was pleading and Tom had to explain.

They walked through the halls to the apartment Cama was to occupy before he told a great deal about the transformation of the city. Cama was surprised again and again as workmen passed him with tools and repair equipment for the various machines.

The windows in Cama's apartment overlooked the gardens of the building and Tom pulled back the curtains. When Cama saw the men driving the machines back and forth over the ground he watched with awe.

He had seen machines they used a thousand years before to cultivate with, but never hoped to see them working the ground again. The change was beyond his grasp and the man they brought with him was fearful of getting more than a few feet away. He was afraid and not ashamed to show it.

Tom left Cama for a while and giving him the freedom of the upper floors and gardens, left three men to see no one molested him.

It was a surprise to find the people showed no hatred toward Prince Cama but were too busy with their own work to think about him. Each had his work to do and was happy doing it.

Tom found television equipment that could be used, with records discovered in a building so long deserted it had been forgotten, and promised the people entertainment. The machine was mounted in a hall where two thousand people could be seated and from the oldest to the youngest they talked of the moving figures he promised.

He was worshiped and no task was too hard for him to set. They worked with a vigor unknown before and the comfort of home was looked forward to with the greatest pleasure. Life was something to be lived, not just gone through.

VIII.

AS TIME PASSED he took Cama through different parts of the building to see men at work in every part repairing and replacing. The transformation in his viewpoint began to take place. One day as they passed men struggling with a piece of machinery he went forward to give them a hand and spent the afternoon working with them.

Tom had been patient, but now he was ready and called Cama to his apartment for a long talk.

"I've waited a long time for this moment, Cama, and I believe you are ready to hear what I have to say. You wouldn't have been when I brought you here, but you have been here long enough to understand what I want.

"You have seen for yourself what work does for people when they know they are accomplishing something. They are interested in everything I'm doing. They have far more comfort than your own people who hold them slaves. I've given them many advantages that you lack and I want to do the same for your people. But there is one requirement I must make.

"There are to be no more slaves. You can rule your people the same as you

always have, but the slaves must be freed.

"The people in the city must all be free, your people as well as mine. These people have a great deal to offer you that you have not in exchange. That will be their protection from your greater numbers. I will open up communication between all the buildings and will put mechanics to work on the buildings you occupy to restore the machinery.

"You can have tools to work your fields that will do the work of fifty men. It will mean you do not have to live through hardship when you no longer have slaves. You have done nothing for so long it will be hard for your people to take up the work when the slaves leave, but they will help you. It will not be long before you will be glad of the exchange you have made and the advantages you receive."

For a long time Cama sat with his head in his hands and said nothing, while Tom watched. It was a long step for a ruler to take and the decision was of great import. The moment spelled life for all future generations. There could be no turning back. The change would be permanent—intermarriage would so knit the two peoples. Finally he looked up.

"I'm in a terrible position, as you know. I'm a friend of yours, and you have done everything you could to make life easy for me while I've been here, although I couldn't leave without your consent. I must judge for all my people and there are many who will question my decision.

"You know more about the best course than I do myself. I've been trained in a certain line of thought and it is hard to change, although I have tried to see things your way. I agree there are untold benefits in taking your offer of freeing the slaves and receiving the advantages you offer in return. You know it is best, and I know you

well enough to know that your course will be best, and still I hesitate.

"My people will be skeptical and afraid of change. There are few who will follow me blindly as they cannot know what you have done here until after the decision is made. Some who were favored by the Ruler would gladly take any chance of doing away with me. My life will be menaced until I'm well established as ruler.

"I am ready and willing to give my life in the effort to raise my people to the standard of comfort and ease you offer, if they may reach it by my death. I will follow any course you select that will lead to their betterment. I am ready, Tom, to do as you bid."

Tears came to Tom's eyes as he finished. He took hold of Cama's shoulders as his emotion got the best of him.

"Cama, I wouldn't make this offer if I didn't know it will be best for all. It hurts me to think of the task I set for you. My friendship is beyond my control but if I could stand in your place I would gladly do it.

"You must return to your people and take your rightful place as ruler. They must accept the change of their own accord or it will lead to trouble. There will be some bloodshed anyway, due to the men held in esteem by the Ruler.

"I have been working on a telephone line to your building and want you to let me know what takes place. If anything is wrong I will come to your aid. Three days from now I will come over to your gardens in my ship. You can tell them I will appear, then if they still doubt I will have to show them some power. Come with me and I will show you the ship."

Two hours later, after riding up and down inside the walls as Tom guided the ship for Cama's benefit, he put him in the car that would return him to the basement of his building.

As the car stopped, Tom silently

reached out his hand and took Cama's.

When the door opened Cama stepped proudly out, and Tom only waited to hear the mixed shouts of gladness and surprise before he headed back for the palace.

HE hated leaving his friend to go through all the trouble alone, and yet knew his presence would only add to the difficulty.

He had work to do. He had promised to appear over the gardens and he was not even sure of the operation of the ship.

Zola felt as bad as he to have Cama leave. He had always been good to her when she was a servant in his house and now as a friend she liked him even better.

"Oh, Tom! I hope nothing happens to him. You have given him a terrific task. His people are all led by superstition and will be afraid to change their ways even if they want to. There will be a lot of trouble before things are settled."

Tom took her in his arms and was glad the time was getting short until he could take her as wife. He ached to hold her close forever, yet dared not let their affection interfere with the work to be done first.

Taking a crew he headed for the ship. After instructing them in the work that must be done on board he went up a short way in the shaft.

At first they looked mutely at him with such fear they were helpless, but they soon got accustomed to the movement of the ship and enjoyed the ride.

The first day they spent going over various parts, putting them in perfect condition. During the time they worked and accustomed themselves to their duties he sent the ship up and down the shaft, back and forth slightly, swung one way and then the other until he was perfectly familiar with the controls.

The second day he ventured outside

the walls and, heading carefully away from the part of the city inhabited by the masters, he ran the huge ship several miles beyond the city walls.

The ground beneath was heavily forested and several times they saw animals amongst the trees but from quite a height they could see no sign of any buildings. The city they left was the only sign of habitation in any direction.

The instruments on the board told direction as well as speed and Tom decided it would be safe to take a longer flight, but at the moment he turned toward home.

The men were instructed in the use of the ray guns mounted around the sides of the hull and they moved them all out through the sides to be sure they could be worked. The next day might bring anything and he wanted to be prepared for any emergency.

The ship finally settled to the bottom of the room built for it. It was fairly easy to manage now and Tom was certain of the controls. The speed was terrific. He tried pressing the foot lever that controlled the rotor, on the way back; and the ship shot ahead so fast it threw the men to the floor.

The next day Tom took Zola with him when he entered the ship with his crew. The feeling of a great occasion was strong in every man and with nervous fingers they went about their duties.

The guards were doubled at all entrances to the building and had been instructed to call for reinforcements at the first sign of any one approaching. He had received no word from Cama and was afraid of what he might find before the day was over. They might attack his people while he was gone.

He issued three ray guns to every group of guards, warning them not to use them unless it was the last extremity. With the equipment they had he felt sure they could withstand any size force.

SLOWLY the ship rose and circled before heading for the building a mile and a half away. The crew were perfectly at home now and he felt they could be depended on in an emergency. They were the proudest men in the building. It would almost seem as though they had been seated on the highest throne.

Every man was as nervous as Tom when the gardens came into view. No sign of people waiting to meet them made apprehension grow that things weren't right.

When the ship settled on the gardens a short way from the building Tom walked down to the floor below. Every man stood at his station by one of the ray guns.

Selecting one of the men he had him place his gun through the side of the ship toward the entrance of the building.

"If they should attack me while I am out there you will have to use the gun, but don't shoot unless I signal to you. There will be too many for me to handle."

The men stood stiffly at their posts. They felt and showed their importance as Tom went on down to the small door in the hull.

The din from within the building was loud enough to be heard the minute the door opened and Tom's heart stopped beating as the sound of fighting came very clear. There was a terrific battle going on inside and he had no way of knowing which way it went. He couldn't go in to see, as the ship would be stranded if he left. None of the men would dare try to take it off the ground.

In a minute some men came slowly out of the door nearest the ship. He couldn't see whether they were friendly from where he stood but they all carried swords.

As they approached he was sure they meant no good. They came slowly with

drawn swords as though to do away with him at all costs.

When they came within a hundred feet he held up his hand.

"Where is your ruler, Prince Cama? If anything has happened to him it will go bad with every one behind it. If you're here on a peaceful mission, where is your ruler? If you're not don't approach any closer or I'll kill all of you."

They hesitated a moment, talking among themselves, but suddenly rushed toward him with their swords in front.

Tom motioned to stay back, but when they came on he reluctantly motioned to the man at the gun.

There was a slight flash as the man disappeared and a hole appeared in the ground. The people in the doorway drew back. Then a larger group of men rushed out. They came at break-neck speed this time, as though speed could overcome the strange gun.

Again he motioned to the man and another hole appeared where they had been. Two escaped the blast and came on. Tom reluctantly pulled the gun from his belt and blew them out of existence.

The people now stood timidly in the doorway looking out, not daring to venture from the building.

The din from within was plainer than it had been and Tom was worried. It was time to take a hand and he stepped forward toward the door.

"If your prince is alive you are lucky. If not, every man who has raised a hand against him will die at my hands. If he doesn't come out I'll come in. Clear the way or you will go the way the others have."

The men backed away at this warning and left the door clear as Tom waited impatiently.

When several minutes passed with no sign from within he called ten of the men to him with ray guns and entered the building.

As they passed through the hallways

a face would appear once in a while only to be withdrawn. For a long way no one was in plain sight but, suddenly, rounding a corner they came upon the back of men fighting. Tom hesitated until he saw Cama's face among the men on the other side of the room.

"Careful, men, not to shoot toward the men on the other side but just pick out the men in this group when they are toward a blank wall from you. Forward."

The first sign they got came when Tom fell on their backs with his men and cut them down with his guns. In less time than it took to advance ten feet the battle was ended. The rebels gave up under the withering action of the guns, and dropped their swords.

PRINCE CAMA came forward with a small group behind him. They showed marks of the fierce fighting. Without a word, the rebels turned and filed back through the passages to the gardens.

When they were well away from the building Tom turned to Cama. "I had to kill some of your people who tried to attack the ship as well as those inside. I'm sorry to have had to kill so many."

Cama smiled. "If you hadn't I would still be fighting for my life. The men you killed were trouble-makers. There is no real backbone to the rebellion. They weren't subjects I'll miss. Most of the people are satisfied to follow me, whatever I do."

Tom turned to his companion.

"It won't be long now, Zola, until we are man and wife and I'll not be sorry."

Before returning to the palace, Tom ran several miles out over the open country for Zola to have her first look beyond the city walls. The country was very beautiful. It made Tom feel like going down for a run on real earth for a change. There were open

stretches as well as thick forest and the game was thick. A group of animals in one of the clearings looked like wild cattle, and Tom thought there would be plenty of fresh meat for the people of the city by a little work.

They finally turned back, but not until Tom promised to bring Zola out here some time to walk on the ground and through the trees.

During the following days, as the slaves were freed, Tom took a group of mechanics to the main building of Prince Cama and went to work repairing the wear of centuries.

The best-known people gathered for the ceremony, as Tom and Zola were married. Fully a thousand of Cama's people were in the great hall before time for the ceremony to begin.

Tom led Zola up the aisle, so the audience would see he was taking her as his wife. Former slaves and masters sat side by side as new interest was created between men and girls of the two former classes. There was no room for hard feelings; each had gained too much.

As Tom reached the platform and helped Zola to the seats arranged for them he saw a movement at the back of the room. Prince Cama was leading some girl forward by the hand!

This was a complete surprise to Tom. He didn't know Cama cared for any girl and his coming forward in the wedding ceremony was a shock.

The girl walked with eyes cast down and it wasn't until they were a few feet away Tom saw who she was: not one of the masters, but a slave girl. His heart swelled to think of the effort it must have been for Cama to walk unexpectedly down the aisle with a former slave.

THE CROWD at first made no sound. It was perfectly still until they, too, were seated on the platform. Then

cheers shook the roof. Some may have been shocked, but only for a minute. They knew the prince had dropped all barriers between the two peoples, and nothing could separate them now.

The cheering continued until Prince Cama got to his feet and spoke.

"I am very glad you think I do right in marrying one we considered a different race from ours a short time ago. We will all gain from intermarriage and I hope no one among the people will hesitate to marry the girl of his choice.

"There is something else I want to say while you are gathered here. The man who brought us the greatest happiness we have ever known has promised to show us the new moving figures to-night. It is only the beginning of the new improvements we can expect. We will have all the clothes we need. The gardens have been extended by the machines and all of our machines are being put in order again. We shall have such prosperity as we hadn't dreamed existed.

"To the man who came unexpectedly amongst us we owe it all and I would like to see him supreme ruler over all Borid. Who else with me would see him with the power of life and death over all people?"

The crowd rose slowly to its feet. Tom could hardly find his voice for a while.

"To you, Prince Cama, and all the people gathered here I want to say, I thank you. I will put forth every effort to bring you peace and happiness. I

have been building a giant lamp to replace the sunlight that is needed to make the city healthy and I hope to cure the diseases that have run through your people every few years.

"I have a great deal of work to do and it will take most of my time. For this reason I wish to make a suggestion.

"Let Prince Cama rule you. I will still be high in authority if you wish, but he will make a far better ruler than I can. I am here to rebuild the city.

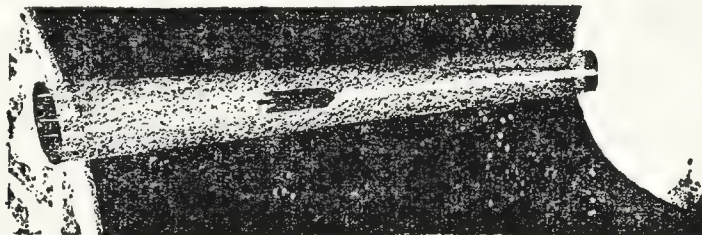
"He will rule justly and fairly. I am taking your ruler away from some of you by marrying Zola, and it leaves you to seek a new ruler. There is not a man or woman who does not know Cama will be the fairest ruler you have ever had.

"Let me hold the position of arbiter over all the planet, but he shall be ruler of the city of Borid. I believe there may be people elsewhere and I wish to find out. With your permission as the arbiter of the planet I will make him ruler of Borid."

As he finished, the roar of approval could be heard for miles, and those who could not be there stopped what they were doing to listen.

When he turned to sit down he looked at Zola. Her look of adoration caused him to clasp her in his arms. He had inherited the finest flower of the planet, as well as its destiny.

He had found a new world and the world had clasped him to its heart. The Earth, wherever it was, seemed very, very far away.





"I Will Answer Them All"—Bob.

Note: I want every serious science-fiction reader to receive this message just as I received it. I want you to all receive the same impression I received as I read these two letters. Please read them carefully.

Dear Editor:

Inclosed is a letter I was instructed to mail to you the 15th of October, but in the sudden turn of events that followed, I overlooked it until to-day.

Perhaps you may already know it by this time, but our friend Bob has passed on. Strangely enough, the last words I ever heard him say concerned your magazine. As I left the hospital, he gave me the inclosed letter to mail, and requested that when I returned the next day I bring a new copy of *Astounding Stories* with me. I did, but unfortunately, I was too late. He was operated upon that morning and never regained consciousness.—Anne Smidley.

Dear Editor:

To-morrow will be the third Wednesday and *Astounding* will help fill in a lot of empty hours. I never knew before how much I liked *Astounding* until I found myself in a spot with nothing to do but count the days.

What I want to talk about is all these fly-by-night societies popping up in *Brass Tacks*. In my opinion, the majority of those are for one reason only—publicity. Perhaps they got jealous of all the space SPWSSTFM was hogging, and decided to cash in on some of the free advertising. Dozens have already appeared, to-morrow's issue will doubtless announce a half dozen new ones. And I bet that you get plenty of letters announcing others that you don't print. In fact, there are so many clubs, the whole thing is becoming a bore.

I have thought a lot about it, and have come to only one conclusion: all of these societies must be banded into one or two. The combined rosters of the—two, shall we say—will amount to hundreds.

The two clubs with the largest membership should be the leaders, all the smaller ones merging into the two larger ones. For instance: all the societies for staples join the SPWSSTFM:

all societies against them join whoever has the largest roster on that side—which is not the IAOPUSA by any means.

I intend to work toward this goal when I get back on my feet again. In the meantime, I wish some of the gang would start the ball rolling. You have favored such a move, editor. I would suggest one person take it upon his shoulders until I can get back into the light.

You know, the SPWSSTFM will be one year old this November. I intended to put out a birthday issue of the *DJournal*, but the pill rollers and sawbones have taken all my cash—so it must wait.

Am going to close as the cats are coming—and you ought to see the swell nurse that feeds me. You fellows that haven't got any letter from me, please excuse it. I will answer 'em all as soon as I get out of here.—Bob Tucker.

Note: We have lost a staunch supporter, and he leaves a challenge to you to carry on. Think carefully over his message concerning science-fiction organizations. There could be no finer tribute to his memory than the accomplishment of the goal toward which he bent his thoughts. Will you accept his challenge and work for unity?

Problems Answered!

Dear Editor:

This will be my first letter to you in two years of reading your magazine. Since I have been reading *Astounding Stories* I have noticed little worthy of calling for a complaint. There have, of course, been minor errors, but these are almost unavoidable.

In regard to a semimonthly, if you can give us as good a magazine, go to it, but keep the standard where it is. In reading the October *Brass Tacks* I noticed a few points I may be able to clear up for the boys.

Willis Conover wants *The Star That Would Not Behave* explained. Let us assume we have a sphere of light minutes diameter with a perfectly reflecting inner surface. If we put an electric light bulb at the center of the globe, let it shine for a short time, and then remove it, we create a somewhat similar condition.

The light rays will go to the mirror surface and reflect back on their original paths. When they reach the center each ray will pass through the center of origin and, to the person standing near, it will seem as if he were seeing the original bulb, but it is really only a concentration of the original light rays, and what he sees is the back of the bulb. The concentration will continue to reappear at equal intervals until the rays are all gone.

To Bob Cloud: The image would move only at the original speed of the object. Try this by taking a magnifying glass and focusing a moving light on a sheet of paper. The rays travel at light speed, but the image they form moves only as the original object moves.

In the original large sphere, a person looking away from the center would see only a slight brightening of the darkness. The amount of brightness would depend on the distance from the eye to the center.

Douglas Mayer wants to know why the Moon is used for the jump to Mars in *The Son of Old Faithful*. It figures out that a speed of about 7 miles per second is necessary to escape from Earth's gravity while only 1.5 miles per second will release one from that of the Moon. Therefore, a ship would use less fuel in going from the Moon, or with the same load of fuel could make better time on the trip, due to the added speed. In the story, speed seemed to be essential.

To Dictator Tucker, his cohorts and his opponents, I say: "Wire staples or no wire staples, it's a good book, so what?"

I see by your editorial you want criticism. Have some:

The cover is poor. Brown shows the nebula appearing as a gas swirling around the room, when it is so thin a gas that it could be detected only by instruments. For the same story, Dold and Brown show scenes only a few seconds apart. In that time the hero makes a complete change of helmet. Since he is surrounded by the pseudonebulium, how did he do it? Dold also shows the nebula through the window when it has already hit the Earth and would not be visible.

For *The Way of All Earth* Marchioni shows the space reptiles with feet, although what use they would be to creatures of space is beyond me. Neither can I see the need of wings to creatures of an airless void who are unaffected by gravity.

A final suggestion, why not give a year's subscription to the writer of the best letter to Brass Tacks in respect to constructive criticism, etc. Make it one every three or six months.

Let's have Doc Smith's next story when it is ready.—D. C. Thomas, 4516 Forbes St., Pittsburgh, Pennsylvania.

Thank You!

Dear Editor:

Although I have not written you for some time, do not think that I have been inactive. Since I have last written, I have introduced two new readers to *Astounding Stories* and other science-fiction magazines, and at present I'm getting to work on another fellow to whom I have loaned my current issue of *Astounding Stories*.

And by the way, would it be all right if I say hello to an avid science-fiction fan friend of mine through your columns? I'm speaking of Ernest E. Rowland, Jr., of De Lane, Florida. Although he is not known to Brass Tacks, he has done a great deal to further science-fiction and also *Astounding Stories*.

Your October pep editorial was great. The editorials always are so sincere that I actually feel as though I know the editor.

This current cover is one of Brown's best. When there are figures involved it always makes the cover more interesting to me. I also think that if Brown's covers were a little bit more vivid, and if he blended his colors more, they would look a whole lot better.

Frank B. Long's stories are always interest-

ing to me. They involve more human interest and less dry, technical explanations.

While I'm on the subject of science and technicalities, couldn't we have stories with science in them, but not stories with two and three paragraphs of scientific description and whole pages that are all nothing but a scientific lecture.

Another thing that greatly annoys me is something like this: Professor So-and-So unconsciously lapsed into his lecture room style and addressed Mr. Whosis as though he were a class of students.

Best wishes for your third year.—James N. Mooney, c/o Longshore, Westport, Connecticut.

It's the Edges Again!

Dear Editor:

This is my first letter to you. It includes compliments and slams. The compliments go to Nat Schachner, S. G. Weinbaum, D. R. Daniels and Jack Williamson for their excellent stories. *I Am Not God* is perfect. It is exciting with just enough science to make it possible. *The Planet of Doubt* is good and also *Islands of the Sun*. The story *Night* didn't seem very plausible, but it was interesting.

There has been a lot of talk in Brass Tacks about the edges of the pages of the magazine. As for me, you can have them any darned way you please. I buy the magazine for the stories, not for the looks of the edges.

A while ago, I got a rival science-fiction magazine and compared it with *Astounding Stories*. The stories in the other were rotten, but there was one thing pretty good: the editor's note at the foot of each letter. Why can't you have that in your magazine?

The illustrations are pretty good. E. Dold is running true to form.

You can add my vote for a semimonthly, if you can keep up the high standard. My main hope is that you put a note at the bottom of each letter and lift the burden of questions from our weary shoulders.—Ray Williamson, 455 Ridgewood Rd., Maplewood, New Jersey.

Power en Masse!

Dear Editor:

Inasmuch as your magazine is the best in the field, and has the greatest possibilities as an ideal science-fiction magazine, we should like to have this published, as, we hope, an inspiration for readers of a similar mind to express themselves.

Our intentions in writing this letter are to settle once and for all whether the readers will do something about the present situation. There has been in your columns, a great deal of controversy as to the virtues of your magazine, but never before has any group of readers banded themselves together for the achievement of a common aim. With this purpose in mind, we are going to voice what we hope to be corrections.

As to the illustrations and illustrators, we believe that Dold is far superior to any other illustrator in the field, and that he should be given covers as well as interior illustrations. Of course, we realize, as has been proven by your competitors, that no single artist can do all illustrations exclusively. And so we advocate M. Marchioni helping with the interior.

We find no reason why Dold should not do the covers as evidenced by the superlative material furnished by his November and December illustrations for the *Skylark* serial.

As a final measure as to illustrations, we demand one full-page illustration for every story exclusive of novelettes and serials, to which should be given two full-page illustrations. This concludes our opinions as to illustrations and illustrators.

Concerning the stories themselves, we believe that *Proxima Centauria*, *The Mightiest Machine*

and all of Stanley G. Weinbaum's works can be held as ideals in science-fiction. These stories, you will note, have a good deal of the quality which characterized the older stories, which you have been striving to get away from.

We believe that in this list should be included *Redmask of the Outlands* and its sequel, also *Warriors of Eternity* and its sequel. There has, of late, appeared in your magazine certain stories by that arch-fiend Stanton A. Coblentz such as *Triple Geared*, *Radio Mind Ray*, *The Truth About The Psycho-tector* and *Riches For Pluto*. These we believe to be the lowest depths to which science-fiction can lower itself.

The same may be said of Calvin Peregro with that lunatic, nit-witted, abysmally foolish Dr. Conklin. We wish that you would discontinue the attempts at humor (?) and instead put a little more action in your narratives, at the same time reviving the Hawk Carse series.

As to your Brass Tacks columns, we fail to see any reason for the name given to it, and would advocate a return to the name *The Readers' Corner*.

We have noticed, on the whole, that your readers appear to be of a fairly intelligent turn of mind. The only thing that amazes us is that a person of Tucker's apparent mentality is able to write at all. Furthermore, the fact that his inane ravings are published in your columns casts no slight aspersion on the editor's own mental condition.

We wish to state that we would be all too willing to pay five cents more per copy and have the edges trimmed. If your circulation is even approximately as great as you say, then this convenience would not be very expensive to you.

We have noticed that many cheaper publications in the pulp group have trimmed edges, and it is on this point particularly, as well as the aforementioned covers by Dold, that we wish the readers who are in agreement with us to write to you in a group. We invite discussion and backing through the columns.—Robert C. Niece, W. W. Wolford, Robert Lee Cordray, 1583 East 82nd St., Cleveland, Ohio.

Only a Few Requests!

Dear Editor:

You're the top, and then some! The stories and artists have more than kept the pace. Thanks for getting Jack Williamson back. Of course, it wouldn't be human to err, or to be satisfied, so here I go!

More stories by Stanley G. Weinbaum, Edmond Hamilton, Frank K. Kelly, Carl Buchanan and Dr. Arch Carr, C. L. Moore. Eando Binder, John W. Campbell, Jr., Murray Leinster, Harvey Bates, Clifton Bryan Kruse.

Try for stories by David H. Keller, M. D., Lawrence Manning, John Benyon Harris, Festus Pragnell, Clark Ashton Smith. We would also like a good story by Stanton A. Coblentz, not one of his rubbishy, satirical shorts, but something like the *Blue Barbarians* or *After 12,000 Years*—I kneel as I write these names—also stories by Ray Cummings, Charles Willard Diffin, Anthony Gilmore, Robert Wilson, Edwin K. Sloat, Hal K. Wells. John Russell Fearn is foul, chuck him out.

Please, Mr. Editor, we want interplanetary stories, lots and lots, something like *Proxima Centauri* or *Mightiest Machine*—not the *Skylark*. I hope Williamson's new one is a 10-part interplanetary serial like *The Legion Of Space*.

We also want smooth edges, a quarterly, an annual, a semiannual, and make Astounding Stories go twice a month. We don't want drawings by Marchioni or covers by Brown. We want Paul. Keep Dold. Where is Wesso? Where are H. P. Lovecraft, A. Merrill, G. A. England, Otto Willi Gall, Robert Wilson, W. E. Giesy and R. H. Romans? Come on, answer up, editor. We got you on the spot. I, we, challenge you for the answer.

Re-issue Strange Tales and, also, please print the Planetecr. I'll buy every darn copy in England. Here's a tip. Stop all this nonsense about

the SPWSTSTM or whatever it is, also the FAOUMPTERFUSA, etc. Once your readers start to laugh at part of the magazine they, in time, will laugh at the whole thing. Of course, we shan't, but then we are different.

Yes, dear editor, it's a strenuous job to read science-fiction. First, you can't buy it, then the pater toddles up, uncorks a bellow of fury, and tearing up your latest Leinster or Schachner or what have you, tells you to read good English literature. Four of the boys and two girls.—Francis L. Ellissen, A. Ward, R. H. Spiers, J. A. Comer, Tony Lupino, Micheline Surcine, 6 Cardigan Rd., Richmond, Surrey, England.

Wants Superscience!

Dear Editor:

You asked for criticism and you're going to get reams of it, constructive and otherwise. I realize the difficulties of writing and editing science-fiction and I am naturally a little hesitant in passing judgment on either authors or editors. But, as every one, I have my ideas, preferences and criticisms—so here they are—from front to back—beginning of course at the cover:

The cover of the October 1935 issue is one of the few artistic covers I have seen on a science-fiction magazine. It is quiet enough that even the most timid should not be scared away, and yet the helmeted figure and the astounding title in the red block, *I Am Not God*, are truly eye-compelling, yet not blatant.

The covers have been showing a definite improvement for six months. Please do not use covers like on the June 1935 issue. The covers of August 1934 and September 1935 are nearly perfect for your magazine. Please keep H. V. Brown.

As we turn from the cover we see the advertisements. You see—my criticism does not pass up anything. I am glad to see you have a fair class of advertisers.

Next—the contents page: completely satisfying in its make-up. A suggestion: could you not include, either on this or some other page, or scattered about as formerly, a hint as to the feature stories for the coming month—not necessarily a complete list.

Next—the interior illustrations: Dold is the best, is the truth—nuf sed. Why do not the other artists put their name on their work?

Now the stories: in the October 1935 issue: *Night* was a wonderful conception—better than *Twilight*. It was a depressing story, but I liked it for its atmosphere—well written. *Derelict*—very good, but obviously wanting a sequel. A good character study—of a man, and of a machine. *Islands of the Sun*—part two much better than one, but far below Williamson's standard. Interesting. *Intra-Planetary*—a new manner of presentation but not a new idea—I do not like most medical stories, or intra-homo, if I may coin words. *I Am Not God*—a gripping story—I wait eagerly for the conclusion. *A Princess of Pallis*—an interesting bit of well-written, light adventure—interplanetary, my favorite field. *The Planet of Doubt* and *Way of the Earth*—same comment as above. *Faceted Eyes*—interesting. *Phantom Star*—fair.

Next the editorial: I like this much better than a scientific treatise. O. K.

And Brass Tacks: Have Dold draw a new picture heading for this department. A few comments on readers' suggestions: Quarterly vs. semi-monthly vs. new magazine. The third is definitely out. I much prefer a quarterly, but I fear it would not be a success. A semi-monthly would be too much drain on the bank roll. Stay as you are for a time and give us the benefits of a more rigid selection of stories.

Do not, as one reader suggests, put a word limit on letters. The long drama by Miss Poppe was much preferable to several shorter, less well-written letters. And letters from Smith and Campbell are the longer the better.

More science vs. less science: Give us superscience, as *Skylark*; well-written fantasy, as

Greater Glories; light adventure, as *A Princess Of Paltis*; but go easy on long, rambling stories that are not so astounding. Short stories of any type, if fairly well-written, are acceptable—but be careful with the longer stories. John Taine's *Twelve Eighty-seven* and *Islands of the Sun* were barely passable because of this fault. We want suspense, action, or at least compactness.

Incidentally, the thought-variant stories are invariably the best. *Galactic Circle*, *Colossus Eternal*, *Living Equation* and the Campbell and Smith stories have truly astounded me, for all my years of reading science-fiction. Sorry I missed *Rebirth*.

As for science content of stories: *The Avatar* was too dry—too much textbook science. *Islands of the Sun*, might have been helped by more science, as well as a more closely woven story. Please do not give us material of the type of *Doc Savage*. I literally devour really good super-science—all of E. E. Smith's and John W. Campbell's stories.

Aside from this argument of adventure vs. science is another field—pure fantasy. Of course, we do not want ghost stories, but if you have read Williamson's and Merritt's works you know that fantasy can be built from a super-scientific foundation.

You object that Lovecraft writes only weird fiction. I believe he could equal Merritt if he but began with a scientific foundation. That wonderful story *Greater Glories* is a perfect example of my point—and have you read *Through the Gates of the Silver Key*? Give us more like this.

I liked the *Phantom Dictator* and I liked Charles Fort's *Lo*. And I do not care for Dr. Keller's stories.

The magazine in general: The type, both for stories and Brass Tacks is all right. Don't bother yourself over type of paper, smooth edges, etc. It's the contents that count.

And now—may I shift gears? Tucker, Sterling and Wollheim have all overlooked the most obvious method of binding our magazine. I submit, patent applied for, that you bind *Astounding Stories* with—you've guessed it—Brass Tacks. What could be more obvious and reasonable. Of course, chewing gum is O. K. Plain wire or platinum staples are old fashioned. I might mention that my patented Brass Tacks—developed in collaboration with Paul Bunyan—permit loose-leaf binding—another improvement.

Well, Doc Hackensaw wants me to return his voice typewriter so I will have to sign off.—L. M. Jensen, Box No. 35, Cowley, Wyoming.

Dold Takes It Now!

Dear Editor:

I've just about finished the October issue, and it's swell! The cover was one of Brown's best pieces of work, but some of the interior illustrations didn't burn the magazine, because they weren't so hot.

Let's start with Dold. I like his work a great deal, but he sort of falls down on the job in spots. His chief weakness seems to be in human beings. They look so unnatural. Then, he makes his machinery and things too complex. Complex machinery is all right for a science-fiction magazine, but I think he goes to extremes. Marchioni's work is picking up, but who let that illustration for *Faceted Eyes* creep in?

Is there a possibility of getting Edgar Rice Burroughs? It was his stories that first introduced me to science-fiction. If it hadn't been for him, I wouldn't be reading *Astounding*, and I wouldn't have interested three other people in your fine magazine. So you see, he's indirectly responsible for at least four subscribers. How about it?

Why not put such book-length serials as *The Legion of Space*, *The Skylark of Valeron* and *The Mightiest Machine* in book form? I'll bet they would sell.

In closing I would like to comment on the fine

work you have done with *Astounding*. I didn't like the way it started under the new management, but it's the best there is now!—Robert Boelke, New Lenox, Illinois.

We Agree!

Dear Editor:

The three best stories in the November issue were, in my opinion, *The Red Peri*, *Blue Magic*, and *Fruit of the Moon-Weed*. The concluding serial, *I Am Not God*, also rated high. The cover was good.

You can do as you wish about science editorials, but I don't see why we would need them in this magazine. What we want is fiction, not a lot of editorials on facts that can be read in the libraries. Keep your own personal editorials.

I've read other magazines for years, and I have found out that whenever they try to publish science editorials the stories are crowded out for lack of space, their quality suffers, or the price of the magazine is, as a rule, raised. Therefore, thumbs down on science editorials.—Bob Califf, 235 Broadwater Ave., Billings, Montana.

Straight to the Point.

Dear Editor:

This is my first letter to a magazine, but one has to start some time, no doubt. I have been rather interested in your efforts to improve your publication. I hope they are as sincere as they seem to be, because your field is a good one and many more people would be interested in it if better work were done there.

Your cover painting by Howard Brown for October is the most attractive of such covers that I have seen for some time. The one he did for the September number was rotten. In the first place, it looked like a steamship poster, and reminded one unpleasantly of a map. The color was hard and disagreeable, the subject matter had no attraction, and the general composition was crude. There really was no composition, to speak of. In fact, it had no appeal to one's curiosity or aesthetic sense, either.

The cover on the October number was particularly good for its colors. They were harmonious and pleasing. The greens and warm blues fitted in well with the more intense yellows and reds of the letterhead. Perhaps you editors don't realize it, but the actual artistic attraction of a cover, its pleasing of the eye alone, has a great deal to do with the selling powers of your magazine. Naturally you do realize it, but not the way I mean.

A cover has to do more than startle the public. And perhaps you are not entirely aware of it, but the public taste in artistic matters is considerably better than it was ten years ago. Your artist probably knows what good illustration is. Give him free rein, and see how it turns out. Let him pick his own story and illustrate it in the way he thinks most fitting.

This business of trying to give the public exactly what it says it wants is no bed of roses—because it doesn't exactly know. It knows what it likes when it sees it, but it is unable to say clearly, in a great many cases. Many times it will like utterly unpredicted things.

As a pulp magazine, *Astounding Stories* is in the higher class along with some—at least one—of its rivals. My big complaint is that the plausibility of the stories is ignored too often. Whether the idea is reasonable or possible has nothing to do with the matter. It only needs to be convincing. Stories like *Islands of the Sun*, *The Blue Infinity* and *W62 To Mercury* are examples.

I thought the style of *W62 To Mercury* rather cheap. The whole idea and theme was hackneyed. *Islands of the Sun* was too much the sentimental swash-buckling type. Also it lacked plausibility. The hero was too good, the villain was too bad, the situations too pat, the plot

too obvious. The same criticisms can be directed toward *The Blue Infinity*.

The stories I have liked are, *Earth Minus*—especially to be recommended—*Sky Rock*, *The Upper Level Road* and *Night*. Oh, yes, the *Galactic Circle*, also, was rather good.

I think the October issue of *Astounding Stories* the best so far.

I hesitate to tell you my profession because it probably would lessen the value of my criticism. What you want, I imagine, is the opinion of the general, average public. Mine isn't precisely that.

In any case, I wish you would try to get your writers to put more realism in their stories. You know what I mean. When an author says, "The man was mentally deficient," you don't particularly believe him. But when he says, "William had never been able to learn to lace his shoes, or use a fork without hurting himself," you know full well that William is mentally deficient, without the author futilely telling you so. Your stories often have too much of that fault.

But as I said, there are many worse magazines on the market, and yours is getting better. Thanking you for your kind attention.—Kenneth Lynch, Siloam Springs, Arkansas, Box 63.

Provoking, Although Unscientific!

Dear Editor:

I must say that *Intra-Planetary* in the October issue was thought-provoking, although unscientific. Nearly all of us have speculated on the possibility of germs and other forms of unicellular life possessing intelligence. In observing the actions of typhus bacillipneums-coeci and other forms of bacteria, I find that their action seems to indicate that they not only possess no intelligence, but they have no cognizance of existence. However, others may have observed different reactions and, if so, I would like to hear from them.

I was glad to see a story by an author whom I consider the best of the younger writers: J. Harvey Haggard.

Astounding Stories is getting better and better. Personally, I believe that the present editorial policy gives us well-balanced stories. With a few exceptions they are all scientifically sound, have enough adventure and the love interest is kept in its proper place.

I would be glad to hear from any one interested in chemistry and Esperanto.—Robert H. Anglin, 252 Jefferson Ave., Danville, Virginia.

The Welsh Attack!

Dear Editor:

Like every one else, I have something to say about H. H. Welsh's gentle compliment to science-fiction in general, and *Astounding Stories* in particular. I am going to surprise you, if not shock you. Of course, H. H.'s letter was not up to the usual cranks missive. For instance, it lacked the beautiful irony of letters by Wollheim and Kaletsky. However, it served its purpose very well and he will no doubt acquire polish with time.

Despite this, Welsh's letter serves a purpose. "What purpose?" you inquire. Just this: that quotation of his—he says it is a parody, he's wrong, it's the real thing.

Editor, don't you remember the story that contained this masterpiece of literature? It was masquerading as a Th-v, something about dimensional planes and a scientist with false hair—the villain—remember? Now don't get me wrong, editor, that story was an exception, but it appeared—one of the feature stories, too. What I'm attempting to get over is this: why, when you can have such good stories as you usually print, do you allow such junk?

That story was supposed to be a Th-v. I like most Th-v's but must you put up with such

terrible writing to get a Th-v? I know when you can get such good stories as *Islands of the Sun*—which was certainly a Th-v—that you don't have to print such junk. Incidentally, after condemning us fans for judging science-fiction, Mr. Welsh proceeds to judge it himself, as well as the fans, and condemns the whole lot.

All you who love science-fiction, and would see it prosper, can you not see that that villain Tucker and his highly insidious SPWSSTFM, are assassinating this noble institution? Come, brothers, join the noble SFPS and stem the tide of "societism" which threatens to engulf all science-fiction in its murky depths. Send your name in membership to—Arthur R. Mink, 1802 N. 8th St., Boise, Idaho.

We Do Try.

Dear Editor:

Although I have read different issues of *Astounding Stories* for the past two years, I have not been a steady fan, but if you continue to have issues like the September one, you may be sure I am with you strong. My reason for buying it was C. L. Moore. Both Moore and Wandrei are reasons enough for my buying. Nor was I disappointed in their stories—*Greater Glories* and *Earth Minus*.

I think—no, I believe your September issue is your best so far, and it shows you are striving to please your readers. That's what I like about you. I will help by saying Taine's story was the only one I disliked. I don't like water in cream. 'Nough said.—L. A. Chaplin, 2203 Goodrich Ave., Morning Heights, Aberdeen, South Dakota.

From a New Reader.

Dear Editor:

I am a new reader of science-fiction and enjoy it very much. So far, I have failed to find anything which can compete with your magazine. *Brass Tacks* is very interesting, but would be much better if you would comment on the letters.

According to some of your readers they must think that this magazine is printed for them only. There are other readers to consider, and they should not forget that fact.

Now for the illustrators: Some work better on one type of story than on another. Find out which they do best and let them go at it.

I saw some complaints that science-fiction is not fit to be read. To the people who think that way: why read it? Also, there are some readers who do not want science in their science-fiction stories. These people should read love stories or something else.

Some complaints about your covers—from other readers, of course. Why not put the printing at the top and the picture at the bottom, in a box so, that it doesn't run together? I do not think that it would be necessary to remove all the printing from the covers. Maybe that would satisfy some of them for a while.

Couldn't you give us a better quality paper even if you do have to charge a nickel more for the magazine? What about it, you readers?

If this should get into *Brass Tacks*, I would like to hear from other readers of *Astounding Stories*. Thanks.—Owen Montgomery, 429 East Walnut St., Oneida, New York.

Thinks "The Skylark" is Still the Best!

Dear Editor:

Your serial novels are great stuff! Of course, *Islands of the Sun*, *Twelve Eighty-Seven*, and other late serials could hardly be classed with the *Skylark* series, yet they are very interesting and contain new ideas.

Islands of the Sun gives one a new conception of our solar system. Of course, a geologist wouldn't give it much weight, but it is some-

thing to think about. Something new, something interesting, something fairly plausible, all written in an interesting style, makes such a novel worth reading.

A very few of your novelettes have been great, many of the thought-variant type were very interesting, but they have been too short. The author takes a short-story idea and pads it up to novelette size. *The Galactic Circle*, *Colossus Eternal*, and a few similar ones could make a person sit up and take notice. How about a Hawk Carse novelette, just for old time's sake?

Brass Tacks is a very interesting section for those of us who like to read readers' letters and get other people's viewpoints on various ideas. However, it should not be abused by publicity seekers—saying anything just to see their names in print. To avoid this I would suggest not publishing the writer's name.

Had We Considered Your Story Plagiarism We Would Not Have Bought It!

Dear Editor:

I give the following four points against the contention in Brass Tacks that my story, *Man of Iron*, was a "brazen plagiarism" of Leinster's *The Mole Pirate*.

(1) As near as I can recall, the whole plot of the story, ideas, and all, has been stored away in my mind for some five years—long before the advent of *The Mole Pirate*. This should convince the credulous mind.

(2) Leinster was not the first writer to use the basic idea in his story which, I presume, I am supposed to have stolen. There were at least three or four others who treated it, though Leinster was the first to wrap a whole story around it, and myself the second. Even the incredulous mind should now be satisfied, not only that I didn't plagiarize but that I couldn't.

(3) Leinster did not use the same fictional method of weaving two solids together as I did; nor did he treat it, as I did, as a natural outgrowth of this condition which was the principal part of *Man of Iron*, i. e., the probable explosion that would result when two solids became aware of each other's presence, so to speak.

(4) If *Man of Iron* were to be condemned on the grounds that it dared to possess a basic idea in another tale, then think of the numerous naughty authors who have practically taken as their own whole plots from such once-original stories as *The Time Machine*, *War of the Worlds*, and *Journey to the Center of the Earth*; and think what we would have missed had they not done so.

I believe I have dispersed whatever doubts were sown by the accusation made against me; *quod erat faciendum*.—Ross Rocklynnne, 322 West 4th St., Cincinnati, Ohio.

After the First Year!

Dear Editor:

This, the November issue, rounds out my first year of *Astounding Stories*; so I am going to celebrate the ovation by writing my first, and perhaps my last, letter to you.

I want to say that I quite agree with Norman Sloan; his comments on the illustration were very good. On the whole, I think that your magazine ranks with any science-fiction publication. I have taken two other science-fiction magazines for nearly three years. I shall not state that yours is so terribly superior to the other two. It is, however, better in the sense that it always contains one good serial.

Many people don't like serials. I do. I must say that your latest serials cannot compare with *The Skylark of Valeron* and *The Mightiest Machine*. They seem to contain just the right amount of science and the right amount of adventure. In other words, they are well-balanced. Why not have some more Skylark stories?

Just one more thing: Why not try to get Dold to put more life into his characters? He has wonderful machines, but his people seem to be too stiff and unreal. This is not a hard defect to overcome.

Will some one be kind enough to drop me a letter? Any one in a foreign country or the good old U. S. A.—Lyle Dahlbom, Rock Rapids, Iowa.

On Science Editorials!

Dear Editor:

I am writing this letter in order to give you some idea of how I appreciate your editorials. They represent a new trend in science-fiction in that, instead of their devotion to purely scientific topics, they deal with a subject much closer to the reader's heart—namely, fan letters.

In the November issue, I enjoy the way you gave your opinion on various subjects. It probably accounts for the high standard found in your fan letters. There was one subtle touch which I particularly appreciated. It was this: "The longer ones go out first. They take too much space." I believe this a veritable masterpiece of gentle hints to overzealous fans.

Mr. Diffin ought to be excellent in his conclusion to *Blue Magic*. He has built up the suspense well, and if I know my Diffin I will not be let down.

I am sorry to hear that Stanley Weinbaum is ill. He'd better get well in a hurry. We all like to see one of his stories every now and then.

You seem to think that the kick has gone out of alphabetical societies. If that is so, it is your fault, because you probably have been giving them so much publicity in Brass Tacks that the serious reader has grown tired of them. However, they would soon grow just as tired of a completely scientific Brass Tacks. It takes all kinds of letters to make up Brass Tacks, so they have their use.

I hope yours won't become another magazine containing science information which any one can find if he or she is interested enough. This is probably the method employed by the editors who do write science editorials.

One last plea: please make editorial comments. They would be appreciated.—Alan Aiserstein, 891 Academy St., Woodmere, Long Island.

Nothing to Complain About!

Dear Editor:

The November *Astounding* was a good all-around issue—both stories and illustrations. I'm glad to see Diffin back. I've missed him. Weinbaum's story was of a different type than his usual run—more adventurous. Still, I liked it. I imagine you already have a sequel. The ending sounded like it.

Anything by John W. Campbell, Jr., on hand? What about P. Schyler Miller, Jack Williamson, and Edmond Hamilton?

I really don't know what to say this month. I've nothing to complain about. You didn't give us titles of stories in advance, though.

You might get after Chelsea House to put some of *Astounding's* serials in book form.

I notice you reduced the size of the last word in the title on the cover. I hope it's permanent. I would like to see fifty-page novelettes used from time to time.

Another list of authors I'd like: Harl Vincent, Murray Leinster, Raymond Z. Gallun, Harry Bates, J. George Frederick.

Best cover was: September, 1934.

It's nice to know that *Astounding* has the largest circulation of any science-fiction magazine, but I hope you do not intend to take up space on the cover every month to say so. Too much print spoils the covers.—Jack Darrow, 4224 N. Sawyer Ave., Chicago, Illinois.

We Like Readers' Opinions!

Dear Editor:

I have read your magazine since the first issue, so I think that I am not taking your valuable time for nothing when I express a somewhat belated opinion.

I contend that Stuart's *Twilight* is the best you have ever printed. Really the thing is classic; it's epic. I can't analyze the story; if I could I'd be writing stories like it. *Night* was good but it couldn't touch its sequel; but I wasn't at all disappointed because that one story completely covered a multitude of sins.

In the course of Astounding's career as a publication you have printed a few really poor stories—such as *Lady of the Moon*—a few mediocre and an amazingly high percentage of good and excellent stories. So I have very few criticisms for you.

Your illustrators don't always draw the details to correspond with the story. That really isn't so important, but the little things count up. Also your covers are too lurid. And, while I am at it, are you aware that you have a set-up for a slick-leaf magazine? The Editor's page is all right, couldn't be better.

Oh, yes, I find that your best stories are those which come under the heading of novelettes, with very few serials in the running. Here's to a million new subscriptions to your magazine, and more power to your pen.—L. E. Evans, 98 Seneca St., Pontiac, Michigan.

Another Bomb Thrown into the Fire!

Dear Editor:

I hope you will print this, because I have just read a fact which I think many of the readers do not know. I quote from *News Week*: "He—Dr. R. H. Goddard—convinced his colleagues that rockets did not need air to push against in order to propel themselves, that the recoil of the escaping gases actually kicks the apparatus through space. This he demonstrated in a vacuum tank."

I wish to congratulate you and Jack Williamson on *Islands of the Sun*. It ranks next to *The Skylark of Valeron* as the best thing you have yet printed.—Henry Lemaire, Pomfret School, Pomfret, Connecticut.

You Really Have a Treat in Store!

Dear Editor:

Had you told me that Leonardo da Vinci had come back to life and was going to illustrate for Astounding, I could not have been more pleased! To me the news that Wesso is going to illustrate for you brings your magazine just about as near perfect as you could get it.

And to clinch it with the news that you have obtained a story by Lovecraft, the author of *The Color Out of Space*, that little gem published way back in 1927, does not detract from this opinion in the slightest. Like C. L. Moore, Lovecraft is a weird story author, and if *The Color Out of Space* was an example of his science-fiction, I am sure we have a real treat in store for us.

Also, in your letter you asked me not to force you by demanding more than you can give all of a sudden. I never write letters as demands. One cannot demand anything from a magazine from which he is getting twice his money's worth; one can only suggest where there is, in his opinion, room for improvement.

Just to add one comment: In the November issue you stated that you received thirteen letters saying that *The Blue Infinity*, by Fearn, was poor, twenty-seven saying that it was excellent. In this case I cast my vote with the minority. Why? Because the story was too colossal, too marvelous. It broke all of Newton's laws of motion, completely ignored the law of conserva-

tion of energy—which poor van Kampen went to such trouble to try to disprove and had a million mistakes in just plain reasoning.

For instance: Newton's third law says, "For every action or force there is an equal and opposite reaction." Here we have several million-million tons of matter gallivanting through millions of light years of space, and where on Earth does Fearn get his equal and opposite reaction? And, as H. G. Wells said, in reviewing one of his collected works: "Where everything is possible, nothing is interesting."—Oliver E. Saari, 1427 Logan Ave. No., Minneapolis, Minnesota.

He Liked Weinbaum Before, and Now—

Dear Editor:

From the beginning of science-fiction, readers have complained about the presence of love interest in certain stories. It is positive that after reading *The Red Peri* those readers will be unable to complain. *The Red Peri* was magnificent—indescribably magnificent. For the blurb line at the beginning of the story, you said: "The best story up to now by Stanley G. Weinbaum."

The novel lined up to the blurb. It far surpassed my greatest expectations, and although Weinbaum was admittedly among the best authors, his latest creation undoubtedly proves him the best!

In my opinion, this classic, epic novel was even better than *The Legion of Space*, better than the *Skylark* series. As can be seen by the concluding paragraphs, a sequel is needed to complete the greatest science-fiction novel written. There must be a sequel, perhaps two sequels, perhaps more. Mr. Weinbaum, I salute you.

Your editorial, *The Mail Bag*, was very interesting as, indeed, are all your editorials. They have a certain delightful freshness about them which makes the friendship between the editor and readers seem very strong. This certain friendliness is noticeably lacking in science editorials in other magazines.

As you received two hundred and eighty-seven letters during that month, I can readily see why I failed to find my missive in *Brass Tacks*.

I am saving the serial, *Blue Magic*, until I have all the parts; here's hoping that it doesn't exceed two installments, three at the most. The two-part serials have been very popular. However, even though it does exceed said number of installments, the work of Charles Willard Diffin is certainly welcome after a long absence from our pages.

We know, dear editor, that your superb judgment in the picking of the best, that your try-to-please-all attitude, that your upholding and surpassing the unwritten laws of science-fiction editing will never fail us.—Willis Conover, Jr., 280 Shepherd Ave., Kenmore, New York.

Containing a New Suggestion!

Dear Editor:

I am thirteen years old and am in second-year high school. I have been reading *Astounding Stories* for the past two years. It far surpasses your other rivals. They can reduce their prices to a nickel and I would still buy *Astounding*.

I have been reading a few of the complaints of the readers in *Brass Tacks*, and now I would like to make a few!

- (1) Make the magazine a bimonthly.
- (2) Do not advertise the stories on the cover.
- (3) Even up the edges of the paper in the magazine.

- (4) Not so many long serials. If you must have serials—have them in two parts.

- (5) If you must have long serials, give us *Skylark* stories.

All of the readers have been raving over John

Taine's serials. If there ever was a worse story written, I have never read it.

Give us more interplanetary stories. Earlier in the year there were about two issues you fell down on completely. All the other issues were masterpieces. Give us more such writers as Nat Schachner and Stan Weinbaum.

Here is an idea which I think has never been mentioned before: When you dig up a story such as *The Skylark of Valeron* or *The Mightiest Machine*, put up a special issue containing just the one story selling either for thirty-five or fifty cents.

The Blue Infinity can be classed only with *The Skylark of Valeron*, and I class them both as colossal. The only thing I cannot understand in it is: when cheap work was found in the Gravity-Tripler Generator, why wasn't it replaced? They were still on Earth with all the resources at hand. Outside of this slight slip of thought the story was perfect.

Why do you print the letters of these pests who send in scientific formulas and try to show off their knowledge? What do we care if the story is scientifically wrong as long as it is good reading?—L. C. Rome, Union City, N. J.

Impressions.

Dear Editor:

Impressions of the November issue:

Cover: I don't like the red ship.

Table of Contents: What? No thought-variant?

The Red Peri: Ought to satisfy those who want action stories. A series is indicated and should be as good as Hawk Carse.

Fruit of the Moon-Weed: Fair—nothing terrific. How could he kiss the girl with that helmet on?

Ships That Come Back: Gripping, but not lasting.

When the Cycle Met: Drivel. Where is the beginning and end of a circle?

The Lichen From Eros: Long ought to learn some physics. What body with the attraction of one-hundredth of a g could hold an atmosphere for any length of time? Time rate of little people would be very fast.

The Mail Bag: Twenty-seven letters praising *The Blue Infinity*. Ten to one that every one of those was from some one who knew no science at all. I don't see how they can read science-fiction.

I Am Not God: Green nebula—saving the world which does not want to be saved—rebirth—rebuilding—and the only new thing in the story is the ending. Well written. Why does Dodd insist upon drawing clusters of gigantic separatory funnels—and those titanic beakers?

Bob Califf: Praises *The Blue Infinity* and wants less science. Proves my above point. What do you mean by "dissatisfied morons"? I have been reading science-fiction since 1929 and the covers then were as good or better than they are now. You'll notice those who are dissatisfied are those who have been reading the mags for a long time and who know what they were like in the past.

Ralph Schroeder: A chemist who knows his astronomy.

Randal O'Brien: Whoopie for the last paragraph, but boo for the one before!

Charles Shipley: You had better look up the Fitzgerald equation. Disregarding that, if the Earth did go back into the past, the same people would be on it that were there in the future. In fact it would be very difficult to tell that the Earth had gone into the past at all. Anyway, it couldn't go faster than light, because of mass increase.

Ramon F. Alvarez del Rey: If the address wasn't in Washington, I would think this was another alter ego of John W. Campbell, Jr. But maybe Campbell moved and is fooling us.

Dale Tarr: Those who think a little about science knock *The Blue Infinity*.

Elton Andrews: It seems that only the old readers appreciate Skylark.

Let me repeat what I once wrote before and let the editors please take notice. Science-fiction is science-fiction, and if you don't like science, go read something else. If I had a printing press, I would like to fill a whole page with that sentence, but I hope that this single one will suffice. I don't know how to make it any more emphatic that science-fiction must be written about scientific fact, in the manner that Smith and Campbell write their stories.

You may take it from this letter then that I don't like *The Blue Infinity*, that I like a lot of science in my stories, and that I just eat up stories like *Skylark* and *The Mightiest Machine*.—Milton A. Rothman, 2500 N. Fifth Street, Philadelphia, Pennsylvania.

Likes and Dislikes!

Dear Editor:

The contents of the November issue were, on the whole, nearly as brilliant as the fine cover—one of Howard V. Brown's best compositions. However, I fully agree with Jack Darrow—please eliminate some of the superfluous wordage on the cover. I seem to get the impression that the covers are drawn to fit the redundancy of printing thereon.

For some reason, I prefer a finely drawn short short story to an equally fine novelette. Comparing Stanley Weinbaum with Sinclair Lewis may be peculiar, but Weinbaum has that same ability to build a character. To those who read and liked Hawk Carse stories, *The Red Peri* should prove an equal attraction.

The Red Peri reminds me of C. L. Moore's *Jirel of Jory*. But Weinbaum must draw his stories together. The action in *The Red Peri* was good but it was too disconnected. Long periods of conversation led up to a brief flare of action, subsiding again to a slow tempo. He could have told the story in two thirds the length with better effect.

Thus my compliments to David Beaumont's *When the Cycle Met*. His ending is on par with real literature. And the substance of his story blends a tinge of courage with the great dread—fear of the unknown. Oh, happy future, if mankind breeds men like Lotar Kavic.

What a play *I Am Not God* would make! It is Schachner's best, without reservation. I actually fought to breathe, stared haggardly at the screen with Steve Dodd. We disparage authors whose endings in stories are commonplace and just what we expect in everyday life. But *I Am Not God* rises above this disparagement by the author's brilliance in using the only course which saves his work. Stephen Dodd's final weakening from his objective was the only—the positive course necessary to emphasize Schachner's interpretation of religion.

The Lichen From Eros is a new twist to an old, old idea. Well told, however.

As I am a close friend to Eando Binder, may I be forgiven the accusation of prejudice when I say *Ships That Come Back* is indicative of the constant effort he is making to better his work. Much of his previous output had been slowed by a heavy style and a deadening sameness of scientific expression. But *Ships That Come Back* shows us what to expect from now on. He's on his way up!

Now, Mr. Haggard, you just quit expanding anecdotes into three pages of color description and half a page of story. Didn't you go to a lot of trouble to stir up so much conflict between Wyeoll and Murston? Wouldn't you have had more fun if one of the two was color-blind? Think how they could have argued hue was hue. I do not attempt to criticize a story which does not appeal to me. It is a long jump from fruit flies to human beings, but perhaps Mr. Jessel is justified. Certainly, I am no one to judge.

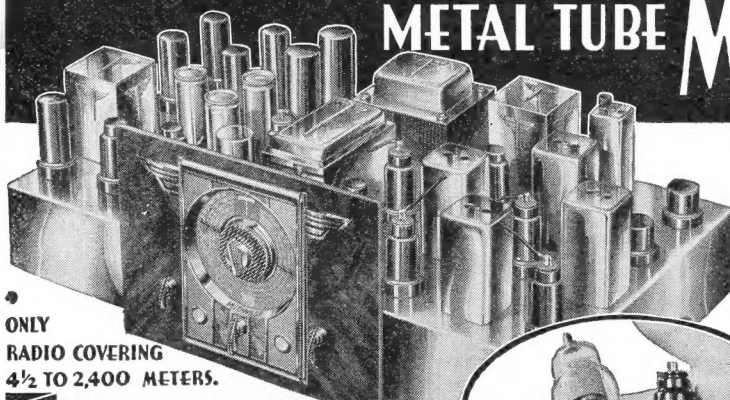
As usual, my appetite for pieces of stories does not exist. Thus, I await the issue which completes Mr. Diffin's *Blue Magic* before reading any individual installment.—Walter Dennis, 4500 N. St. Louis, Chicago Illinois.

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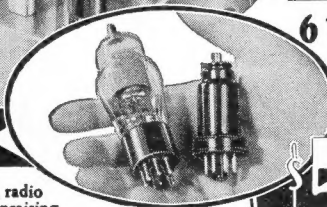
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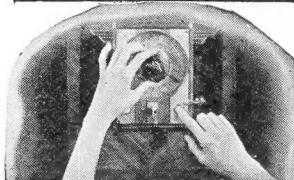
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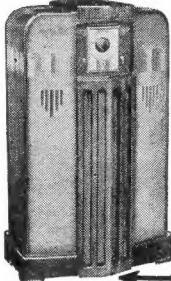
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